

## Functional Requirements of Portal Development

Greetings from KSHEC!

Kerala State Higher Education Council has been in the process of implementing two flagship initiatives as per the decision of the advisory body held on 17-11-2018, which include State Higher Education Survey [SHES] and State Assessment and Accreditation Council [SAAC]. Both are intended to be commenced its function at the earliest period of time. A brief of the SHES and SAAC are given below.

### State Higher Education Survey (SHES)

#### Introduction

Equity, Excellence and Quality have been the overarching goals of the government in the education sector. Several new initiatives were taken up by the central government during the Eleventh Plan (2007-12). The emphasis has been on enhancing supply and increasing access to quality education. Consequently, the Indian higher education system is one of the largest in the world with over 600 universities and university level institutions and more than 33,000 institutes. Education is in the ‘concurrent list’. Over time, while the role and responsibility of the States’ has remained largely unchanged.

Kerala State Higher Education Council is entrusted to prepare the academic database of all institutions offering higher education degrees in the state, consisting the details of academic, administrative, physical infrastructure of the institutions. It is expected to design such a database repository to future retrieval/evaluation and time to time updation so as to equip the government to evolve better suitable strategies on time to time basis for the improvement of educational landscape of the state. It is therefore ideal in its overall design as ist shall incorporate all components of All India Survey of Higher Education [AISHE] presently in operation in the country, in addition to address the special characteristics of the state educational profile. Some of the inclusive features of the state’s socio-economic and environmental aspects are also need to be accessible through this platform as whether the institutions are fulfilling the expected outcome in this broad domain also.

#### 1. State Higher Education Survey: An overview

In Kerala, the target of increasing the gross enrolment ratio (GER) in higher education to 48 per cent by 2030 can be accomplished by a collective approach of all stakeholders of the HE sector in Kerala. It is necessary at this point of time to transform our HE institutions to knowledge dissemination centres, the prevailing has also to be shifted to the status of ‘learning paradigm’.

Indian education sector regulatory heat map

	Higher education	Professional education
Comprises of	<ul style="list-style-type: none"> <li>University</li> <li>College</li> <li>Distance education</li> <li>Research</li> </ul>	<ul style="list-style-type: none"> <li>Technical education</li> <li>Professional courses</li> </ul>
Regulatory Control	<ul style="list-style-type: none"> <li>UGC</li> <li>AICTE</li> <li>State laws</li> </ul>	<ul style="list-style-type: none"> <li>AICTE</li> <li>Statutory authorities (BCI, MCI, NCI, DCI , DGCA etc)</li> </ul>
Choice of entity	<ul style="list-style-type: none"> <li>Society</li> <li>Trust</li> <li>Section 25</li> </ul>	<ul style="list-style-type: none"> <li>Society/ trust / section 25</li> <li>(AICTE &amp; MCI recently allowed Companies)</li> </ul>
Some Additional Conditions	<ul style="list-style-type: none"> <li>Minimum infrastructure requirements</li> <li>Fee regulation</li> </ul>	<ul style="list-style-type: none"> <li>Minimum infrastructure requirements</li> <li>Fee may be regulated</li> </ul>

■ Highly regulated

In order to effect a paradigm shift of convergence of traditional and technology induced teaching-learning environment in the HE academic environment of the state, **the attempt has to be initiated by a comprehensive statistics of present abilities and disabilities of the platform in which it rests.** The categories of the HE institutions of the state have been divided in terms of its regulatory instruments [See Figure given]. The proposed survey covers all the Institutions in the country engaged in imparting of higher education.

**2. Short Title:** Kerala State Higher Education Council envisages a comprehensive database of higher education sector of the state to be developed with a portal based access facility to all institutions coming under this sector through uploading the requested data in time bound manner. The entire survey should be electronic mode and a dedicated portal need to be developed for this purpose making the entire exercise a completely paperless one. The survey is expected to be designed to collect information that will help both higher education institutions and the government to improve teaching and learning outcomes, and reports on multiple facets of the sector. This survey can be termed as ***Kerala State Higher Education Survey (SHES)*** which is funded by the government of Kerala and administered by the council.

**3. Purpose:** Indicators of educational development such as Institution Density, Gross Enrolment Ratio, Pupil Teacher Ratio, Gender Parity Index etc. are calculated from the data collected through SHES. These are useful in making informed policy decisions and research for development of education sector and the survey shall be done on annual basis. In general and in few words, the institutions will have to upload the data of 4 categories. (1) Teachers (2) Students (3) Non-Teaching Staff (4) Assets of Academic and non academic character.

**4. Scope:** The survey will cover all the Institutions in the state engaged in imparting the higher education. Data is expected to be collected on several parameters such as teachers, student enrolment, programmes, examination results, education finance, infrastructure, socio-economic background of students etc. It shall also cover all state specific components that have been procured through All India Survey of Higher Education [AISHE].

**5. Background:** Kerala State Higher Education Council was set up on 16<sup>th</sup> March 2007 through an Ordinance that became legislated as the Kerala State Higher Education Council Act 2007 (Act 22 of 2007). The bodies of the Council are constituted by the Government for a four- year term and reconstituted every four years. The council functions with the purpose of (a) to render advice to the Government, Universities and other institutions of higher education in the State; (b) to coordinate the roles of the Government, Universities and apex regulatory agencies in higher education within the State; (c) to evolve new concepts and programmes in higher education; (d) to provide common facilities in higher education without impinging upon the autonomy of other institutions of higher education.

Apart from developing the conceptual framework, the Council has been providing training to the teachers and extending financial assistance to colleges and universities for the implementation of the restructured curriculum. Teachers are needed to be trained in the nuances of the new pedagogy. Various kinds of skill development activities are being offered by the council for the faculty members of HE institutions. Evolving time to time strategies of teaching/learning environment and quality standards of academic institutions of the state is one of the urgent needs that the council is expected to address.

## **6. Additional features**

In addition to the structure and constituent components in congruent with that of the functional requirements of National Higher Education Survey and above mentioned state specific criteria, the state's survey platform shall require to offer certain services of Kerala State Higher Education Council. These include [1] Chancellor's Award [2] Kairali Research Awards [3] Brain Gain [4] Academic Volunteer Bank etc., in which the survey platform shall offer a space for the overall functions of them.

*6.1. Chancellor's Award:* This award has been introduced by the Hon'ble Governor's Office during 2014. The prestigious award carries an amount of Rs. Five Crores for the best performing university in the state and amount of Rs. One Crore for the best performing university in the emerging young category, for the specific assessment year. The selection process of the award is being entrusted to KSHEC from 2018 onwards. The selection criteria are being computed based on 5 broad categories and 47 different component aspects for consideration. The survey platform shall contain an interface to process the application and evaluate the selection criteria components.

*6.2. Kairali Research Awards:* Government of Kerala with an aim to encourage the most eminent research scholars and research pedagogues of the state, have instituted Kairali Research Awards in various academic disciplines under four categories of scholars viz. Kairali Gaveshaka Puraskaram, Kairali Gaveshana Puraskaram, Kairali Lifetime Achievement and Kairali Global Lifetime Achievement Award. The selection committee consists 5 eminent personalities. The survey platform shall contain an interface to process the nominations obtained to the council under various award categories and to evaluate the selection criteria components as designed by the selection committee.

*6.3. Brain Gain:* The council has envisaged the idea of bringing back the best academics and research personalities belong to the state, from various prestigious institutions abroad. This is in an attempt to receive their excellence and service to the betterment of the academic and institutional benefits of the state. The portal shall incorporate an interface to accommodate their database for ideal and optimum synchronisation of their resource for the states welfare.

*6.4. Academic Volunteer Bank:* This is expected design a platform/interface, in order to facilitate the researchers/academicians/industrialists/eminent personalities of any field of the state and outside the state to offer their resource services in the field of their expertise for the academic betterment of the state. The individuals need to get a space to register voluntarily in such a platform so as to enable the council to utilise their service optimally.

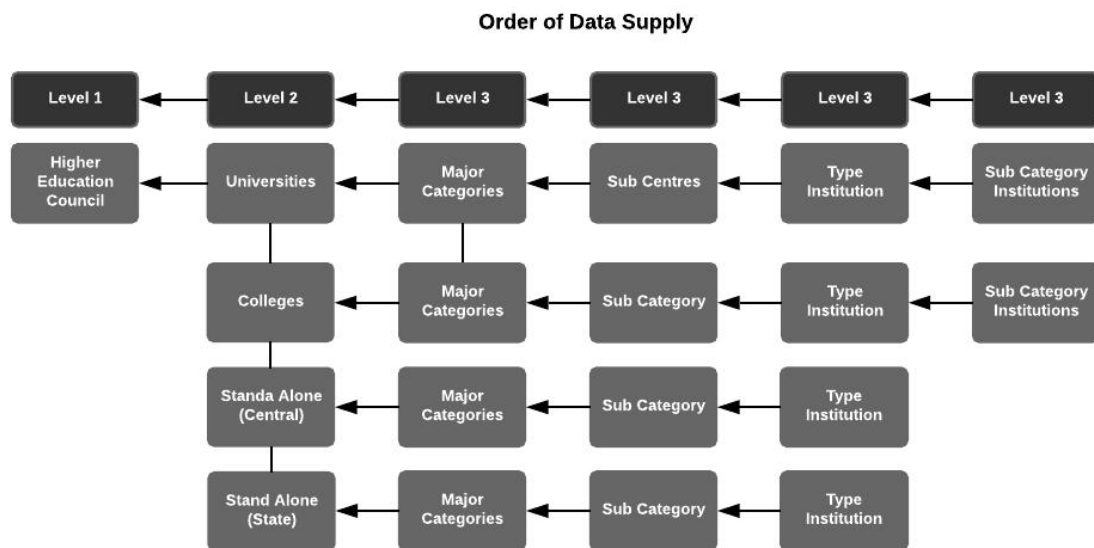
## **7. Assumptions and Constraints**

The successful data generation is possible by the committed involvement of all stakeholder institutions of the HE sector of the state. Necessity of the time bound and precise data uploading will provide the platform for future analysis and policy planning of higher education sector of the state. The time to time data updation and its retrieval will enabled the regulatory bodies to identify the lapses and benefits of the running teaching-learning process.

There is large variation in terms of structure, programme, student enrolment etc., among type of universities and institutions. There could be a synchronized data management to a possible level with AISHE is expected in this system, where specificities of the state socio-economic domains of the state is also incorporated. The task of uploading the accurate and but large quantum of data on the above said 4 broad categories of this sector is a time taking process. To overcome this tussle, the software development shall be in such a manner to be user friendly and less time consuming. Inconsistency of of Stand-Alone Institutions is another factor of concern

**8. Methodology:**

Three Categories of Higher Educational Institutions, namely University, College, Stand-Alone Institution, are to be surveyed. There are also other categories within this broad grouping, characterised by their administration or management. Estimation of the number of total institutions to be covered in the survey is possible, whereas the estimation of other components is possible only when actual student Enrolment and Teachers strength, Non Teaching Administrative Staff Strength, Infrastructure resources, are obtained from the institutions during the course of early part of survey. For student enrolment estimation, level of programme has to be used a stratum while in case of teaching, staff post has to be the stratum. The council will provide the list of broad components of functional requirements as those required in addition to that of National Survey Platform. Necessary components of functional requirements of NAAC/NBA/RUSA guidelines may also be incorporated if found applicable by the council. Following chart shows the general view of the flow of institutions to be obtained through the survey.



**9. Dedicated Portal**

A dedicated portal has to be developed for collection and compilation of the data. All the Institutions need to register on the portal for accessing the portal and uploading its data. The registrations of the Institutions are approved by appropriate level of officers at KSHEC/Colleges/University nodal Officers. The e-version of DCF shall be in such a

manner that it expands according to the structure/size (Number of Faculties/ Departments, Programmes, etc.) of the Institution. The Data Capture Format is downloaded from the portal, filled offline and then filled-in DCF is uploaded, which has made it completely paperless. DCF must be designed in such a manner that no manual aggregation is required at any level. Once data is uploaded by the Institutions, data compilation is done automatically in pre-designed formats. Filled-in DCFs must be available on the portal, which can be seen by the Institutions and higher level authorities and can be modified, if required, till survey is open.

#### **10. Identification of Institutions for Coverage**

The Institutions have been classified in following 3 broad categories and the data to be obtained from them.

**University and University Level Institutions** i.e. the Institutions which are empowered to award degree under some Act of Parliament or State Legislature.

**Colleges/Institutions** which are not empowered to provide degree in its own name and therefore are affiliated/recognised with Universities

**Stand-alone Institutions (Central)** (not affiliated with Universities): These institutions which are not empowered to provide degree and therefore run Diploma Level Programmes under the direct control of the state government/agencies. During the survey, following 5 types of such Institutions have been covered.

**Stand-alone Institutions (State)** (not affiliated with Universities): These institutions which are not empowered to provide degree and therefore run Diploma Level Programmes under the direct control of the central government/agencies.

During the survey, following 5 types of such Institutions have been covered.

Technical such as Polytechnics

Post Graduate Diploma in Management recognized by AICTE

Teacher Training such as District Institute of Education and Training recognized by NCTE

Nursing Institutes recognized by Indian Nursing Council/State Nursing Council

Institutes directly under the control of various Central and State Ministries

types of College/Institution, 1. Affiliated College 2. Autonomous College/Constituent College 3. PG and off. Campus Centre of universities

11. **Reference Period for SHES 2018-19**. The general guidelines in this aspect may be considered as those applied in case of All India Survey of Higher Education [AISHE]. Reference date for filling up the Data Capture Formats was **30th September 2018**. The number of institutions, teachers and students has been recorded on the basis of their actual number as on **30th September 2018**. Information in respect of Examination Result has been collected for the students passed out/awarded degree on or before **30th September, 2018** for the previous academic year. Financial Information has been recorded for the previous financial year i.e. **1st April, 2017 to 31st March, 2018**.

**12. Formulation of Concepts and Definition and Instruction Manual:** All the terms generally used in higher education such as University, college, programmes, discipline, faculty, department, assests have been clearly defined in the instruction manual, which also includes item-wise instructions to fill the forms. Concepts and Definitions used in the survey are given at **Annexure 2**.

**13. List of Higher Education Institutions:** Consulting the websites of the State Government Departments, Ministries, Universities, and Institutions. - Consulting Universities, State Departments for providing the list of Institutions under their control. University are the best source to prepare the list of colleges affiliated with them. List of Stand Alone Institutions through their websites, State Governments and Central Ministries

**14. Partner Agencies** – A division of KSHEC is primarily handling the survey programme and responsible for formulation and design of the survey, which includes preparation of DCF, providing necessary training to nodal officers assigned for each university/colleges/standalone institutions. Eligible firm are allowed software development task.

**15. Mode of Survey** -A dedicated portal (<http://aishe.gov.in> or <http://aishe.nic.in>) is expected to be developed for collection & compilation of the data. All the Institutions need to register on the portal for accessing the portal and uploading its data. The registration of the Institutions is approved by appropriate level of officers at KSHEC/ University/Colleges/Stand Alone Institution (Central and State ) Level and in case of colleges, by University nodal Officers. The Data Capture Format is downloaded from the portal, filled off-line and then filled-in DCF is uploaded, which has made it completely paper-less. No investigator is sent to the Institution to collect the data. In fact the nodal officers appointed by the Institution themselves are the Investigator and they are responsible for filling up the DCF and uploading it on the portal. This eliminates the duplication of effort in data entry once form is uploaded by the Institution. Once data is uploaded by the Institutions, data compilation is done automatically in pre-designed formats. From 2011-12, the Institutions have been provided the facility to download prefilled DCF from the previous year data so that they can update and upload with minimal effort.

**16. Geographical Coverage:** All Institutions of Higher Education located within the Geographical boundary of India, recognised by any Statutory Body established under Central/ State Act will be covered during the Survey

**17. Institutions Uploaded Data under Survey:** In SHES 2018-19, \_\_\_\_ Universities, \_\_\_\_\_ Colleges and \_\_\_\_\_ Stand Alone Institutions have to upload the form on the portal.

#### **18. Institutions**

Institutions taking part in this survey include all stakeholder institutions of various levels. State universities and Central universities functioning within the state are the primary component. The affiliated colleges of aided, government, self-financing nature are the second major component. Institutions of stand alone nature are also forming a major part of it.

#### **19. Core List of Higher Education Institutions**

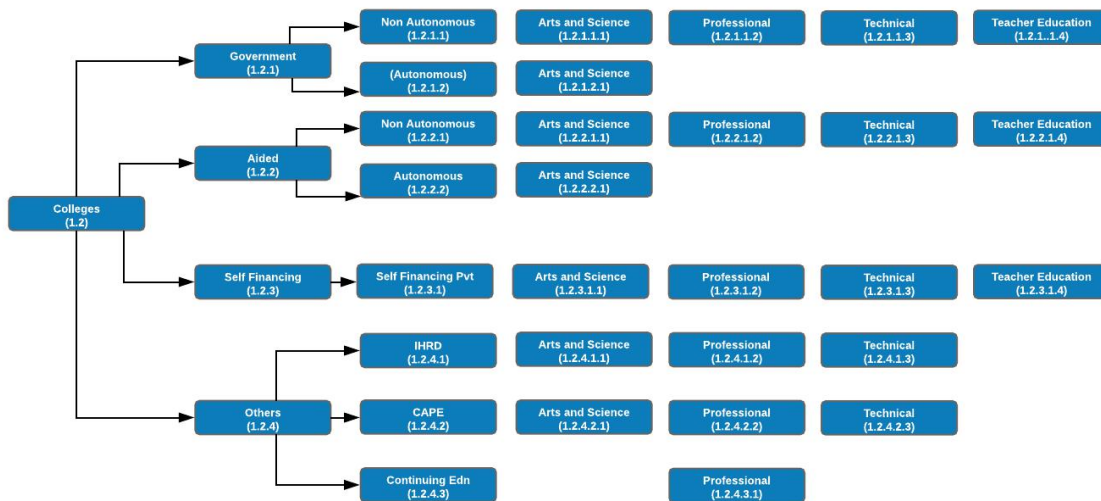
The most important and phenomenal task is to compile the core list of Institutions of higher learning. There are numerous players in this field. Preparing the list of institutions was one of the major components, as there are large number of Institutions of higher learning in the state. The lists of all such institutions under different category has been prepared and Standalone Institutions of Central- run and State -run are separately included. This has been prepared by adopting the following method:

- Consulting the websites of the State Government Departments, Universities and other Institutions.
- Consulting all the Central Ministries, State Governments and universities for providing the list of Institutions under their control.

Different colleges are regulated with different regulatory bodies. There are some colleges whose programmes are recognised by more than one regulatory body. Universities (1), Colleges (2), Stand Alone Institutions (Central) (3) and Stand Alone Institutions (State) (4) have been prepared or categorised. Software need to be designed in such a manner that as soon as these 4 categories upload its form on the server, detail subsets list has to be automatically populated in the data-base.

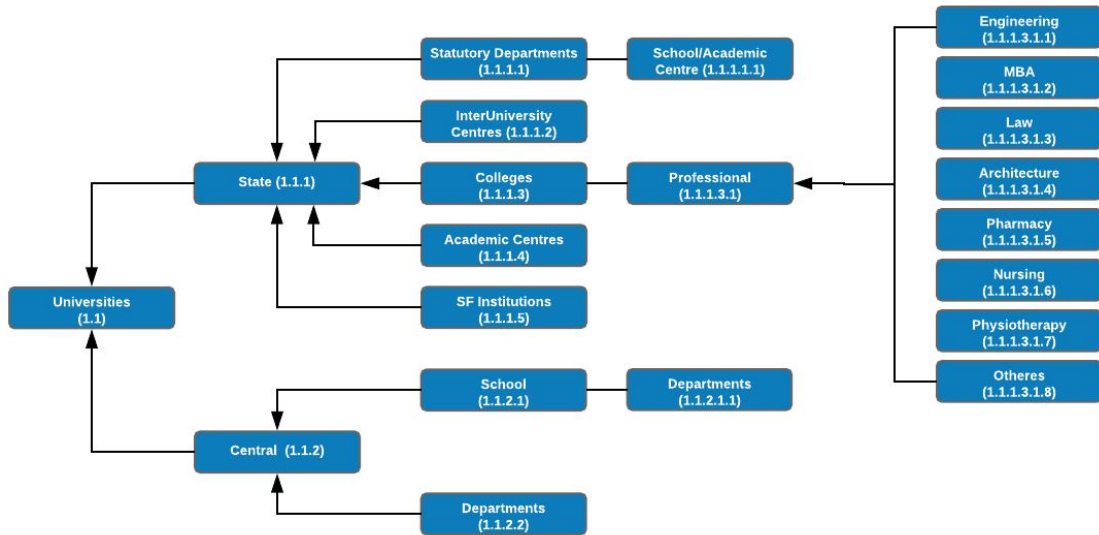
20. **E-version of Data Capture Formats:** The e-version of DCF has to be prepared in such a manner that it expands according to the structure/size (Number of Faculties/ Departments, Programmes, etc.) of the Institution.

### LEVEL 2 to LEVEL 8 Colleges subset

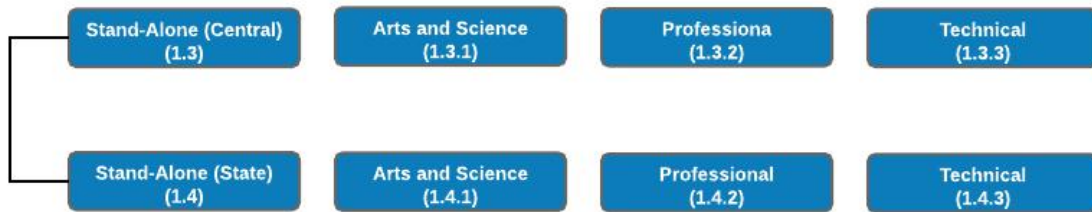


### LEVEL 2 to LEVEL 6 Universities

**Professional Institutions of LEVEL 5 subset**



**LEVEL 2 to LEVEL 5  
Stand Alone Institutions**



**Professional Institutions of LEVEL 6 (others)**



Engineering (1.2.1.1.2.1)	Engineering (1.2.2.1.2.1)	Engineering (1.2.3.1.2.1)	Engineering (1.2.4.1.2.1)	Engineering (1.2.4.2.2.1)	Engineering (1.2.4.3.1.1)
MBA (1.2.1.1.2.2)	MBA (1.2.2.1.2.2)	MBA (1.2.3.1.2.2)	MBA (1.2.4.1.2.2)	MBA (1.2.4.2.2.2)	MBA (1.2.4.3.1.2)
Law (1.2.1.1.2.3)	Law (1.2.2.1.2.3)	Law (1.2.3.1.2.3)	Law (1.2.4.1.2.3)	Law (1.2.4.2.2.3)	Law (1.2.4.3.1.3)
Architecture (1.2.1.1.2.4)	Architecture (1.2.2.1.2.4)	Architecture (1.2.3.1.2.4)	Architecture (1.2.4.1.2.4)	Architecture (1.2.4.2.2.4)	Architecture (1.2.4.3.1.4)
Pharmacy (1.2.1.1.2.5)	Pharmacy (1.2.2.1.2.5)	Pharmacy (1.2.3.1.2.5)	Pharmacy (1.2.4.1.2.5)	Pharmacy (1.2.4.2.2.5)	Pharmacy (1.2.4.3.1.5)
Nursing (1.2.1.1.2.6)	Nursing (1.2.2.1.2.6)	Nursing (1.2.3.1.2.6)	Nursing (1.2.4.1.2.6)	Nursing (1.2.4.2.2.6)	Nursing (1.2.4.3.1.6)
Physiotherapy (1.2.1.1.2.7)	Physiotherapy (1.2.2.1.2.7)	Physiotherapy (1.2.3.1.2.7)	Physiotherapy (1.2.4.1.2.7)	Physiotherapy (1.2.4.2.2.7)	Physiotherapy (1.2.4.3.1.7)
Others (1.2.1.1.2.8)	Others (1.2.2.1.2.8)	Others (1.2.3.1.2.8)	Others (1.2.4.1.2.8)	Others (1.2.4.2.2.8)	Others (1.2.4.3.1.8)

## 21. Definitions

### Level-1

[1. KSHEC Portal]

### Level-2

[1.1. Universities

1.2.Colleges

1.3 Stand Alone Institutions (Central)

1.4 Stand Alone Institutions (State)]

### Level-3

[1.1.1.State

1.1.2.Central

1.2.1.Government

1.2.2.Aided

1.2.3.Self Financing

1.2.4.Others]

### Level-4

[1.1.1.1.Statutory Department

1.1.1.2.Inter University Centers

1.1.1.3.Colleges

1.1.1.4.Academic Centres

1.1.1.5.SF Institutions

1.1.2.1.School

1.1.2.2.Departments

1.2.1.1.Non-Autonomous

1.2.1.2.Autonomous

1.2.3.1. Self Financing Pvt

1.2.4.1.IHRD

1.2.4.2.CAPE

1.2.4.3.Continuing Education]

### Level-5

[1.1.1.1.1.School/Academic Centre

1.1.1.3.1.Professional

1.1.2.1.1.Departments

1.2.1.1.1.Arts and Science  
1.2.1.2.1.Arts and Science  
1.2.2.1.1.Arts and Science  
1.2.2.2.1.Arts and Science  
1.2.3.1.1.Arts and Science  
1.2.4.1.1.Arts and Science  
1.2.2.2.1.Arts and Science  
1.2.4.2.1.Arts and Science]

**Level-6**

[1.2.1.1.2.Professional.  
1.2.2.1.2.Professional  
1.2.3.1.2.Professional  
1.2.4.1.2.Professional  
1.2.4.3.1.Professional]

**Level-7**

[1.2.1.1.3.Technical  
1.2.2.1.3.Technical  
1.2.3.1.3.Technical  
1.2.4.1.3.Technical  
1.2.4.2.3.Technical]

**Level-8**

[1.2.1.1.4.Teacher Education  
1.2.2.1.4.Teacher Education  
1.2.3.1.4. Teacher Education]

The above components of institutions are given as a sample format for preliminary evaluation of the functional requirements.

**State Assessment and Accreditation Council [SAAC]**

The National Assessment and Accreditation Council (NAAC) have the primary mission of assessing and accrediting Higher Education Institutions of the country. As the apex Quality Assurance Agency of the country, NAAC has practiced philosophy of being an 'enabling organization', to achieve the desired quality consciousness among Higher Education Institutions (HEIs), through a three-tier quality sustenance activity

1. NAAC
2. State-Level Quality Assurance Bodies and
3. The Higher Education Institution

While the first level is the organizational effort of NAAC to arrange for third party institutional quality assessment, the role of the suggested partnership with state-level quality assurance bodies (State Level Quality Assurance Coordination Committee -SLQACC and Quality Assurance Cell - QAC or SQAC), is considered significant, both for spreading the awareness of quality assurance, as well achieving the desired coverage of accreditation of HEIs, in an organized and phased manner. Once there is such an initiative of the state Governments in partnership with NAAC, not only the institutions already accredited, but also those which are 'in train' for the A/A process of NAAC,

can design, develop and implement appropriate internal quality assurance mechanisms, thereby complete the three-tier quality assurance pyramid as depicted in the following figure and as advocated by NAAC, during every assessment year.

The necessity of state level quality assurance bodies or government run agency to assess the quality of institutions imparting higher education in the state has been mooted at various levels of debates. Considering the inefficiency in evaluating the specificities of state institutions in terms of its socio-economic-environmental considerations by those agencies run at national level, an agency for assessment and accreditation of quality standards of state institutions especially those in the self financing private sector of the state.

A software platform, may contain the assessment components as envisaged in the NAAC and NBA platform enabling the council to carry out the assessment and accreditation process efficacious and transparent. That shall also to contain some of the pertinent components of state specific ingredients of higher education sector. The inputs regarding the functional requirements are similar to that of NAAC and also to be build to incorporate the necessary components to safeguard the specific socio-environmental-educational components of the state.