

**L2766-MONGOLIA :**  
**Higher Education Reform Project (HERP)**  
**CURRICULUM, TEACHING AND LEARNING**

**GUIDELINE ON HOW TO USE ANALYSIS ON STUDENT AND  
PROGRAM RELATED DATA**

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**Introduction**

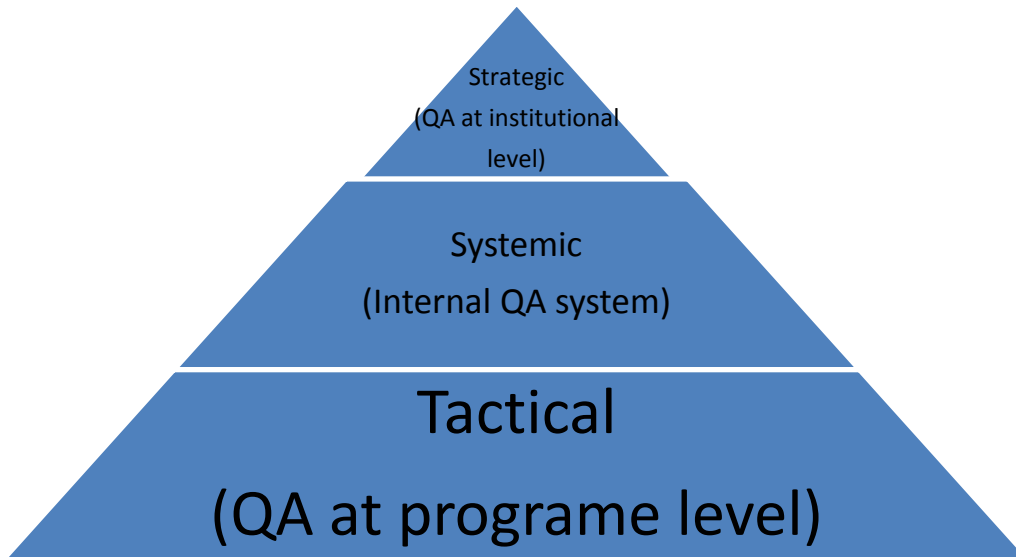
Quality in higher education is not a simple one-dimensional notion about academic quality. In view of the varied needs and expectations of stakeholders, quality in higher education can be said to be a multi-dimensional concept.

The World Declaration on Higher Education for the Twenty First Century: Vision and Action (October 1998), Article 11, Qualitative Evaluation considers quality in higher education as “a multi-dimensional concept, which should embrace all its functions, and activities; teaching and academic programmes, research and scholarship, staffing, students, buildings, facilities, equipment, services to the community and the academic environment. Internal self-evaluation and external review, conducted openly by independent specialists, if possible with international expertise, are vital for enhancing quality.”

This guideline is based on the quality assurance model of ASEAN University Network’s “Guide to AUN-QA assessment at programme level, Version 3.0”([1]). The model guides how to assure a quality at the level of programme and how to collect data and information during the quality assurance process. Hence it corresponds fully to the TOR 15 and partially to TOR 2 of consultants.

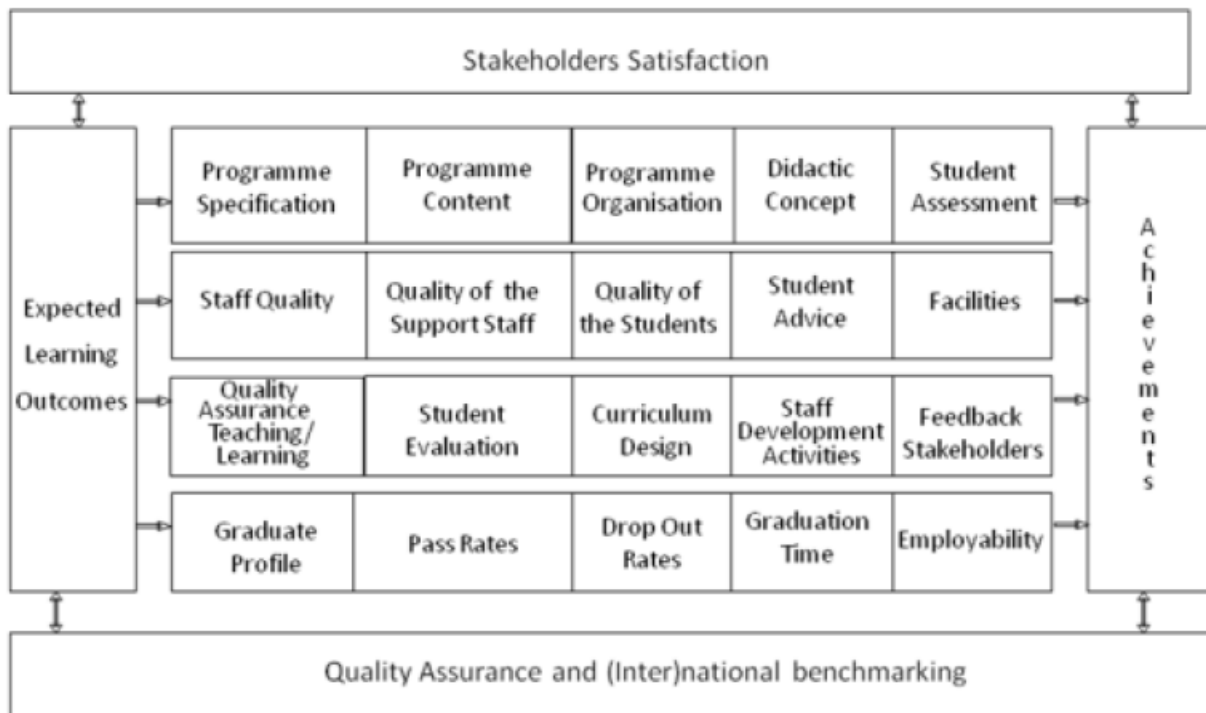
**Program level Quality assurance model**

According to [1], the AUN-QA model has three dimensions including: strategic, systemic and tactical. Each dimensions require internal and external quality assurance. The model is given as follows:



In this guideline we will focus on Program level QA.

The program level QA consists of the components: input, process and output.



The AUN-QA model for programme level (see Figure) starts with stakeholders needs. These needs are formulated into the expected learning outcomes which drive the programme (1st Column). There are four rows in the middle of the model and the first row addresses the question of how the expected learning outcomes are translated into the programme; and how they can be achieved via teaching and learning approach and student assessment.

The second row considers the "input" into the process including academic and support staff; student quality and support; and facilities and infrastructure.

The third row addresses the quality enhancement of the program covering curriculum design and development, teaching and learning, student assessment, quality of support services and facilities, and stakeholders' feedback.

The fourth row focuses on the output of the programme including pass rates and dropout rates, the average time to graduate, employability of the graduates, research activities and stakeholders' satisfaction.

The final column addresses the achievements of the expected learning outcomes and the programme.

The model ends with the fulfilment of stakeholders' needs and the continuous improvement of the quality assurance system and benchmarking to seek best practices.

Hence we need to concentrate at the following 11 criteria:

1. Expected Learning Outcomes
2. Program Specification
3. Program Structure and Content
4. Teaching and Learning Approach
5. Student Assessment
6. Academic Staff Quality
7. Support Staff Quality
8. Student Quality and Support
9. Facilities and Infrastructure
10. Quality Enhancement
11. Output

In [1] it developed check lists to assess the quality according to each 11 criteria.

## **Program assessment phases and PDCA cycles**

Assessment can be defined as a general term that embraces all methods used to judge the performance of an individual, group or organization. Self-assessment is the process of critically reviewing the quality of one's own performance at institutional, system or program level.

Quality assessment in higher education, therefore, can be defined as a diagnostic review and evaluation of teaching, learning, and outcomes based on a detailed examination of curricula, structure, resources and effectiveness of the institution, system or program. It aims to determine if the institution, system or program meets generally accepted quality standards.

Self-assessment is introduced in higher education together with external assessment, accreditation or quality audits. In many cases, self-assessment serves as preparation for a site visit by external experts and the self-assessment report (SAR) provides the external experts with the basic information about the institution, programme and quality assurance system. It also provides an opportunity for the institution and its staff to discover the quality of its quality assurance system.

An effective self-assessment is time-consuming as it requires effort and time from staff. However, the gains from a good self-assessment are valuable. It gives information and facts about the quality assurance system and provides a platform for stakeholders to discuss issues on the quality of education.

The following considerations should be made before carrying out a self-assessment:

- Management must fully support the self-assessment and provide access to relevant information that is needed for an effective quality assurance system. The self-assessment serves to acquire structural insight into the operation and performance of the institution;
- Gaining management support to carry out a self- assessment is not enough. The whole organisation has to prepare itself for the self-assessment. Assessing quality is more than evaluating the performance of a programme; it is also about developing and shaping the institution. Staff members should be made responsible for the quality and all staff should be involved in the self-assessment.
- Writing a critical self-evaluation of the quality assurance system demands good organisation and coordination. Primarily, someone has to lead and coordinate the self-assessment process. The chosen leader should have good contacts within the institution including key management staff, faculty and support staff; have access to obtain the required information at all levels; and have the authority to make appointments with stakeholders.
- It is desirable to install a working group in charge of the self-assessment. It is important that the group is structured in such a way that the involvement of all sections is assured. The working group should be in charge of the selfassessment, gathering and analysing data and drawing conclusions.
- As it is assumed that the self-assessment is supported by the institution, it is important that all staff members should be acquainted with the contents of the

SAR. The working group might organise a workshop or seminar to discuss or communicate the SAR.

Like other steps in QA process, SAR consist of Plan, Do, Check and Act cycles (PDCA). Each steps of SAR also consists of this cycle. We describe PDCA cycle in more detail.

The “Plan” phase consists of:

- Types of Assessment
- Assessment Team
- Schedule & Itinerary
- Explain criteria of assessment and QA processes to staffs and professors

The “Do” phase consists of:

- Gather data and evidence
- Check validity of data and fix
- Preparing a SAR
- Review and improve SAR

The “Check” phase consists of:

- Review reports
- Ask for improvement of SAR

The “AC” phase consists of:

- Improvement of SAR and editing
- Final version of SAR
- Organize introducing SAR to staffs and professors

Likewise, PDCA cycle for program assessment can be given as follows.

Plan

- Select types and form of assessment
- Formation of assessment team
- Make schedules, timelines and plans

Do

- Document analysis
- Site visits

Check

- Prepare SAR
- Present assessment results

Act

- Finalization of SAR and comments
- Get feedback for SAR

## Self assessment reports

Some guidelines for writing an effective SAR are:

- The report is the account of the self-assessment. That is to say, the SAR is not just descriptive but it is also analytical. It includes an evaluation of the problems. At the same time, it provides an indication of how the problems identified will be dealt with.
- Since it is a self-assessment, which is of the utmost importance for an external assessment team, it is important for the SAR to follow a specific format based on the AUN-QA criteria and checklist.
- Illustrate clearly what, where, when, who and how the QA mechanisms or instruments are implemented and managed to fulfil the criteria. This will help you to piece all related information together.
- Focus on information and data (objective evidences) that directly address the criteria. The report has to be concise and factual. Provide trends and statistics to show achievements and performance. The quantitative data requires special attention. The manner in which data is presented is important for the right interpretation of the data. There is a clear need for standardization of data such as student numbers, appointment of teaching staff, staff-to-student ratio, pass rates, etc.
- Self-assessment forms the starting point for improvement between the review committee and the faculty as well as a document for inter-collegial assessment. When conducting a self-assessment, it is important to draw up an institution's own standards and criteria, but it is also essential to take account of the criteria formulated by outsiders, such as an accrediting body. When analysing an institution's own quality, it is important to look for evidence on how far the criteria have been met. If there are no formally formulated standards in the country or region, the standards as formulated in this manual may be used and taken as benchmarks.
- The SAR should be written or translated into a language (i.e. English) that is easy for external assessors to comprehend. Provide a glossary of abbreviations and terminologies used in the report.

We also suggest following structure of SAR.

**Part 1: Introduction**

- Executive summary of the SAR
- • Organisation of the self-assessment – how the self-assessment was carried out and who were involved?
- Brief description of the university, faculty and department – outline the history of quality assurance, mission, vision, objectives and quality policy of the university followed by a brief description of the faculty and department.

**Part 2: AUN-QA Criteria**

This section contains the write-up on how the university, faculty or department addresses the requirements of the AUN-QA criteria. Follow the criteria listed in the self-assessment checklist.

**Part 3: Strengths and Weaknesses Analysis**

- Summary of strengths - summarise the points that the department considers to be its strengths and mark the points that the institution is proud of.
- Summary of Weaknesses - indicate which points the department considers to be weak and in need of improvement.
- Completed self-assessment checklist as in Appendix A
- Improvement plan – recommendations to close the gaps identified in the selfassessment and the action plan to implement them.

**Part 4: Appendices**

Glossary and supporting documents and evidences

## Appendix 1. QA criteria and score

A 7-point rating scale is used for AUN-QA assessment. It provides universities and assessors an instrument for scaling their verdicts and to see how far they have progressed in their AUN-QA journey. The 7-point rating scale is described below.

<b>Rating</b>	<b>Rating Description</b>
1	<b>Absolutely Inadequate</b> The QA practice to fulfil the criterion is not implemented. There are no plans, documents, evidences or results available. Immediate improvement must be made.
2	<b>Inadequate and Improvement is Necessary</b> The QA practice to fulfil the criterion is still at its planning stage or is inadequate where improvement is necessary. There is little document or evidence available. Performance of the QA practice shows little or poor results.
3	<b>Inadequate but Minor Improvement Will Make It Adequate</b> The QA practice to fulfil the criterion is defined and implemented but minor improvement is needed to fully meet them. Documents are available but no clear evidence to support that they have been fully used. Performance of the QA practice shows inconsistent or some results.
4	<b>Adequate as Expected</b> The QA practice to fulfil the criterion is adequate and evidences support that it has been fully implemented. Performance of the QA practice shows consistent results as expected.
5	<b>Better Than Adequate</b> The QA practice to fulfil the criterion is better than adequate. Evidences support that it has been efficiently implemented. Performance of the QA practice shows good results and positive improvement trend.
6	<b>Example of Best Practices</b> The QA practice to fulfil the criterion is considered to be example of best practices in the field. Evidences support that it has been effectively implemented. Performance of QA practice shows very good results and positive improvement trend.
7	<b>Excellent (Example of World-class or Leading Practices)</b> The QA practice to fulfil the criterion is considered to be excellent or example of world-class practices in the field. Evidences support that it has been innovatively implemented. Performance of the QA practice shows excellent results and outstanding improvement trends.



Appendix 1. Quality assurance score table

<b>1 Expected Learning Outcomes</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>
1.1 The expected learning outcomes have been clearly formulated and aligned with the vision and mission of the university							
1.2 The expected learning outcomes cover both subject specific and generic (i.e. transferable) learning outcomes							
1.3 The expected learning outcomes clearly reflect the requirements of the stakeholders							
<b>Overall opinion</b>							
<b>2 Programme Specification</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>
2.1 The information in the programme specification is comprehensive and up-to-date							
2.2 The information in the course specification is comprehensive and up-to-date							
2.3 The programme and course specifications are communicated and made available to the stakeholders							
<b>Overall opinion</b>							
<b>3 Programme Structure and Content</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>
3.1 The curriculum is designed based on constructive alignment with the expected learning outcomes							
3.2 The contribution made by each course to achieve the expected learning outcomes is clear							
3.3 The curriculum is logically structured, sequenced, integrated and up-to-date							
<b>Overall opinion</b>							
<b>4 Teaching and Learning Approach</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>
4.1 The educational philosophy is well articulated and communicated to all stakeholders							
4.2 Teaching and learning activities are constructively aligned to the achievement of the expected learning outcomes							
4.3 Teaching and learning activities enhance life-long learning							

<b>Overall opinion</b>							
<b>Student Assessment</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>
5.1 The student assessment is constructively aligned to the achievement of the expected learning outcomes							
5.2 The student assessments including timelines, methods, regulations, weight distribution, rubrics and grading are explicit and communicated to students							
5.3 Methods including assessment rubrics and marking schemes are used to ensure validity, reliability and fairness of student assessment							
5.4 Feedback of student assessment is timely and helps to improve learning							
5.5 Students have ready access to appeal procedure							
<b>Overall opinion</b>							
<b>6 Academic Staff Quality</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>
6.1 Academic staff planning (considering succession, promotion, re-deployment, termination, and retirement) is carried out to fulfil the needs for education, research and service							
6.2 Staff-to-student ratio and workload are measured and monitored to improve the quality of education, research and service							
6.3 Recruitment and selection criteria including ethics and academic freedom for appointment, deployment and promotion are determined and communicated							
6.4 Competences of academic staff are identified and evaluated							
6.5 Training and developmental needs of academic staff are identified and activities are implemented to fulfil them							
6.6 Performance management including rewards and recognition is implemented to motivate and support education, research and service							
6.7 The types and quantity of research activities by academic staff are							

established, monitored and benchmarked for improvement							
<b>Overall opinion</b>							
<b>7 Support Staff Quality</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>
7.1 Support staff planning (at the library, laboratory, IT facility and student services) is carried out to fulfil the needs for education, research and service							
7.2 Recruitment and selection criteria for appointment, deployment and promotion are determined and communicated							
7.3 Competences of support staff are identified and evaluated							
7.4 Training and developmental needs of support staff are identified and activities are implemented to fulfil them							
7.5 Performance management including rewards and recognition is implemented to motivate and support education, research and service							
<b>Overall opinion</b>							
<b>8 Student Quality and Support</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>
8.1 The student intake policy and admission criteria are defined, communicated, published, and up-to date							
8.2 The methods and criteria for the selection of students are determined and evaluated							
8.3 There is an adequate monitoring system for student progress, academic performance, and workload							
8.4 Academic advice, co-curricular activities, student competition, and other student support services are available to improve learning and employability							
8.5 The physical, social and psychological environment is conducive for education and research as well as personal well-being							
<b>Overall opinion</b>							
<b>9 Facilities and Infrastructure</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>
9.1 The teaching and learning facilities and equipment (lecture halls, classrooms, project rooms, etc.) are							

adequate and updated to support education and research							
9.2 The library and its resources are adequate and updated to support education and research							
9.3 The laboratories and equipment are adequate and updated to support education and research							
9.4 The IT facilities including e-learning infrastructure are adequate and updated to support education and research							
9.5 The standards for environment, health and safety; and access for people with special needs are defined and implemented							
<b>Overall opinion</b>							
<b>10 Quality Enhancement</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>
10.1 Stakeholders' needs and feedback serve as input to curriculum design and development							
10.2 The curriculum design and development process is established and subjected to evaluation and enhancement							
10.3 The teaching and learning processes and student assessment are continuously reviewed and evaluated to ensure their relevance and alignment							
10.4 Research output is used to enhance teaching and learning							
10.5 Quality of support services and facilities (at the library, laboratory, IT facility and student services) is subjected to evaluation and enhancement							
10.6 The stakeholder's feedback mechanisms are systematic and subjected to evaluation and enhancement							
<b>Overall opinion</b>							
<b>11. Outputs</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>
11.1 The pass rates and dropout rates are established, monitored and benchmarked for improvement							
11.2 The average time to graduate is							

established, monitored and benchmarked for improvement							
11.3 Employability of graduates is established, monitored and benchmarked for improvement							
11.4 The types and quantity of research activities by students are established, monitored and benchmarked for improvement							
11.5 The satisfaction levels of stakeholders are established, monitored and benchmarked for improvement							
<b>Overall opinion</b>							

### Full-Time Equivalent (FTE)

In calculating the FTEs of academic staff, institutions should define what constitutes full time student loads and faculty teaching loads including part-time students and faculty at their percentage of full time loads.

There are different ways in calculating FTEs and institutions should state the method, parameters and assumptions used. One of the methods to calculate FTEs is based on the investment of time. For example, if 1 FTE is equal to 40 hours per week (full-time employment), then the FTE of an academic staff member with a teaching load of 8 hours per week will be 0.2 (i.e. 8/40). The investment of time method can also be used for calculating FTEs of student. For example, if 1 FTE student has to attend 20 hours of lesson a week, then the FTE of a part-time student with 10 hours of lesson a week will be 0.5 (i.e. 10/20).

Another method to calculate FTEs is based on teaching load. For example, if the official full-time teaching load of an academic staff is 4 courses per semester, then each course accounts for 0.25 FTE. If an academic staff member is assigned 2 courses per semester, then the FTE will be 0.5 (i.e. 2 x 0.25 FTE). Similarly, student study load can be used to calculate the FTEs of student. For example, if 1 FTE student has to take 24 credits load per semester, then the FTE of a student with 18 credits load per semester will be 0.75 (i.e. 18/24).

Use the table to specify the number of academic staff and their FTEs in the last 5 academic years.

Category	Sex		Total		Percentage of PhDs
	M	F	Headcounts	FTE	
Professors					
Associate professors					
Full time lecturers					
Part time lecturers					
Visiting					
Total					

### Staff-to-student Ratio

This indicator is the ratio 1 FTE academic staff member employed to the number of FTE students enrolled. The aim is to give an idea of how much contact time and academic support students at the institution may expect to receive. Specify the staff to student ratio in the last 5 academic years as per Table.

Academic year	Total FTEs of Academic Staff	Total FTEs of Students	Staff-to-student Ratio

### Research Activities

Research is an important output from academic staff. The types of research activities (such as publications, consulting work, projects, grants, etc.) carried out by academic staff should meet the requirements of the stakeholders. Provide data on the types and number of research publications in the last 5 academic years as in the following table.

Academic year	Number of publications			Total	No. of Publications Per Academic Staff
	Institutional	National	International		

Programme quality depends mostly on interaction between staff and students. However, academic staff cannot perform their roles well without the quality of services provided by the support staff. These are the support staff members who manage the libraries, laboratories, computer facilities and student services.

Use following table to specify the number of support staff available in the last 5 academic years.

Support staff	Educational degree				Total
	High school	Bachelor	Master	PhD	
Librarian					
Lab staff					
IT					
Administrative					
Student service					
Total					

Data on students and entrants

Academic year	Applicants		
	No applied	No offered	No enrolled

Number of students

Academic year	Number of students					
	1 <sup>st</sup> year	2 <sup>nd</sup> year	3 <sup>rd</sup> year	4 <sup>th</sup> year	More than 4 year	Total

Pass rate and dropout rate

Academic year	No students	Percentage of graduates			Dropout rate			
		3 years	4 years	> 4 years	1 <sup>st</sup> year	2 <sup>nd</sup> year	3 <sup>rd</sup> year	4 <sup>th</sup> years, beyond

References

[1] ASEAN University Network, Guide to AUN-QA assessment at program level, Version 3.0, 2015.