

Quality in Teaching-Learning Strategies: The Case Study of Khulna and Uttara Universities of Bangladesh

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Government of Bangladesh has approved the 'The Bangladesh Accreditation Council Act, 2017' with an objective to ensuring standards of quality in higher education both at the public and private universities in the country. Along with being an internal assessor, Government will also act as an external assessor to change the structure of University Grant Commission (UGC). Government of Bangladesh has the goal and vision to have quality education at higher institutions by 2021, to enhance quality in teaching, learning and research. This exploratory research covers case studies of two programs, taught at the two universities, namely Uttara University and Khulna University in Bangladesh, by applying Bloom's Taxonomy, Feisal-Schmitz Taxonomy and Kirkpatrick's evaluation model. The paper suggests that under Bay of Bengal Initiative for Multi-Sectoral Technical and Economic Cooperation (BIMSTEC), a regional body, may develop an educational framework, similar to Australian Qualifications Framework. As such, Government of Bangladesh may give proposal to the BIMSTEC for taking initiatives for regional cooperation in the education sector. The paper also highlights the role of International Network for Quality Assurance Agencies in Higher Education (INQAAHE), International Association of universities (IAU), and European Association of Institutions in Higher Education (EURASHE) that may help higher educational institutions in Bangladesh and South Asia to improve quality by networking with national, regional and international educational institutions in the Asia-Pacific region.

Keywords: Teaching, Learning, Quality, Ranking, Research.

1. Introduction

Government of Bangladesh through HEQEP, University Grant Commission (UGC), and Quality Assurance Unit (QAU) and with the help of World Bank is trying to develop an institutional quality assurance cell for higher educational institutions for ensuring quality in higher education in Bangladesh. So far, sixty-one universities have participated under IQAC project in Round: one, two, and three and Round four is in progress. The Jatiya Sangsad (Parliament of Bangladesh) on 7th March, 2017 passed the Bangladesh Accreditation Council Bill 2017 aiming to ensure quality of higher education at both public and private universities.¹ This was prepared with a view to ensuring standards of higher education in public and private sector higher education institutions. The law will facilitate establishing an Accreditation Council that would provide the universities accreditation for the activities of the higher educational institutions after monitoring and evaluating their

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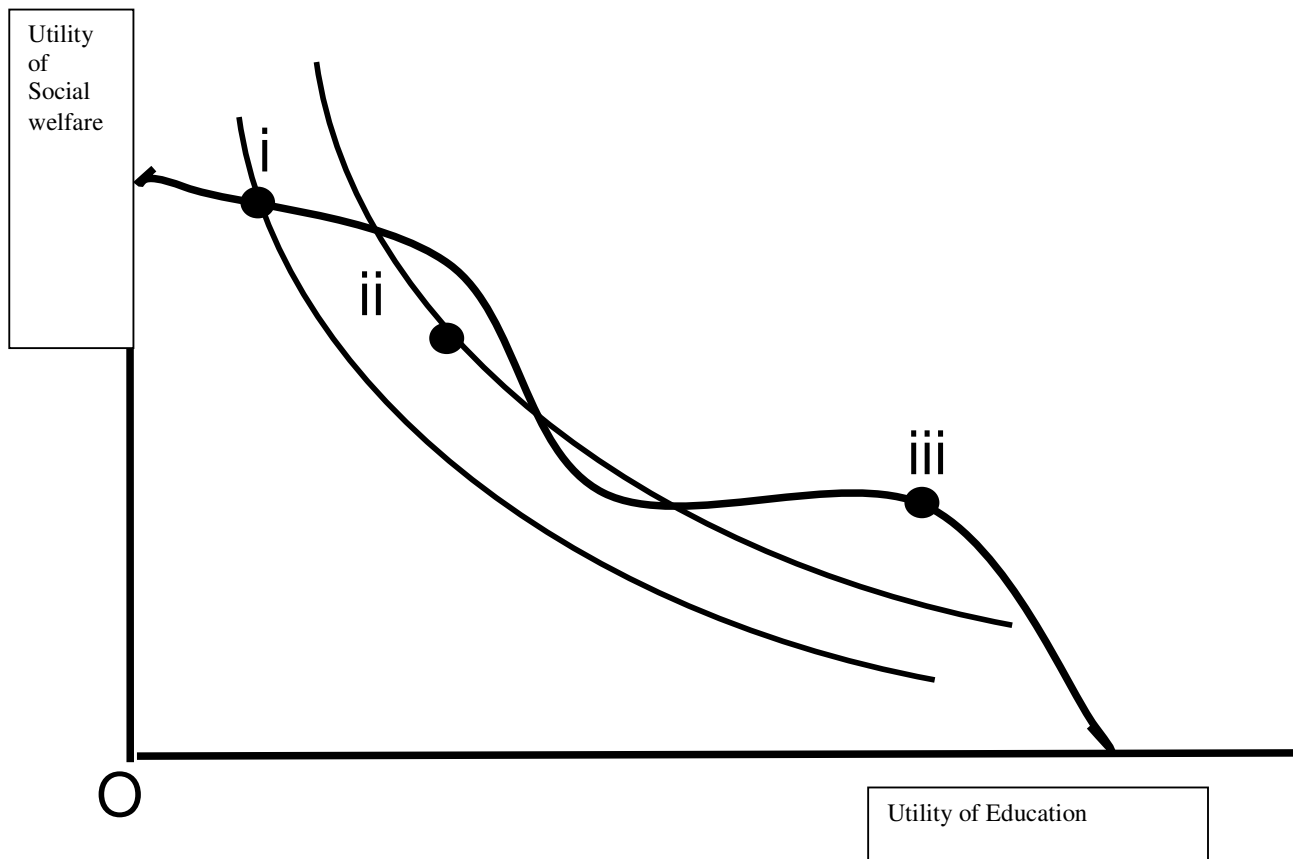
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¹<http://www.newagebd.net/article/10703/index.php> (viewed on 1st March,2017)

activities and performance. The Council will have the responsibilities in ensuring quality education, accrediting the higher educational institutions and its curriculum and programs, formation of separate accreditation committee for each discipline, determining the conditions of accreditation and confidence certificate and cancelling the accreditation and confidence certificate under reasonable grounds technique and training of learning, particularly as an educational topic or hypothetical thought refers to pedagogy at higher educational institutes, which is going through transformation to object based teaching- learning system. This study aims to explore that when quality in higher education is improved and enhanced, than social indifference curve will be tangent with grand utility possibility curve and Pareto efficiency can be achieved. In the vertical axis we measure Utility of social welfare while in horizontal axis we measured utility of education. Now in Figure: 1 below the highest possible social welfare, point is iii, which is Pareto efficient is shown.

Figure - 1: Maximizing Social Welfare



Bangladesh Accreditation Council

As per the bill, the Bangladesh Accreditation Council Bill 2017 would be autonomous statutory body headed by a chairman with four full-time and eight part-time members. Government would appoint the chairman who would be a senior university professor having teaching experience of 25 years and have knowledge about quality assurance and accreditation. Public university professors having teaching experience of 20 years and people having experience of working with state administration for 25 years would be eligible for becoming full time and part time members. Initially a university would get a confidence certificate for one year and should be allowed to get accreditation certificate for five years. All universities would make their accreditation certificate public through online. There should be accreditation committee for large disciplines like medical, engineering, agriculture, business, law, social science, arts, biological science, physical science, said UGC officials.² In April 2012, the education ministry approved the

draft of the bill and sought opinions of ministries, universities, and departments concerned. The draft of the bill was approved by the cabinet on March 28, 2106.

² <http://www.newagebd.net/article/10703/index.php> (viewed on 1st March, 2017)

Participatory Teaching-Learning System at HEIs

To ensure and uphold quality assurance at tertiary education, participatory teaching and learning system is very important [1, 2]. However, no step has been taken to introduce ranking system for the universities in Bangladesh, like in other Asian countries and Australia. Participatory teaching-learning system at higher educational institutions is essential for the teachers to create engaging classroom atmosphere for the sake of transforming students in order to make them employable that is work ready for the real world. Effective communication of teachers with students has positive influence on good teaching and learning system, which further depends on skill, knowledge, experience and attitudes of the teachers. Their needs a process through involvement and engagement of students via constructive feedback, so that teaching staff and university learning and teaching cells can make improvement in content, teaching methods, curriculum, pedagogy, and assessment tasks, applying theory to real life situations.

Case study: Khulna University (KU) and Uttara University (UU)

Khulna University was established under the Khulna University Act of 1990 that was enacted by the parliament of the People's Republic of Bangladesh with the vision and missions to kindle higher education and research in different fields of knowledge. The vision and mission of Khulna University is guided by four core values: (i) freedom of thought and expression, (ii) fairness and equality, (iii) diversity and inclusion, and iv) collaboration and engagement [3].

Vision of KU: Khulna University strives to create a knowledge-based just society through accelerating inclusive and transformative growth of Khulna, Bangladesh and the world. The university aims to achieve this vision through research, scholarly enquiry and development of new knowledge. [3]

Mission of KU:

- To explore human potential fully and produce self-motivated, aspiring leaders to work for the betterment of the humankind.
- To create a transformative educational experience for students focusing on poverty eradication, food and nutritional security, environmental sustainability, socio-economic well-being and climate resilient development, through judicious management of natural resources of the country.
- To foster creative learning, entrepreneurship and inquisitiveness among students based on moral values, professional ethics, and social responsibilities.
- To ensure a quality educational experience that enables graduates to make demonstrable economic and social impacts through translating knowledge and innovation into practice.
- To nurture an enabling environment that produces human resource inspired by wisdom, freethinking, creativity and unhindered intellectual exercises.

Khulna University started its academic programme in 1991 with semester system. The University has six schools, two centres and a research cell, besides a Centre of Excellence in Teaching and Learning (CETL), which is one of the six existing CETLs established by UGC in public universities of Bangladesh. Further, University has also set up its Institutional Quality Assurance Cell (IQAC) that works for assuring quality in education, research and governance.

There are 26 disciplines under six schools, which act as degree program offering entities in the University. Physical facilities, such as classrooms, libraries, laboratories and field laboratories are provided adequately. The University has medical facilities for primary medical treatment. The University also offers student accommodation in five residential halls, three for male and two for female students. Transportation facility is also provided for students and staff.

Khulna University is the first public university of Bangladesh, which has contributed to the social, economic and cultural life of the South Western region. The academic programmes and services are driven by the needs of the community and the economy in a global context so that the graduates can successfully meet the challenges of the dynamic world. There are a good number of national and international research projects being carried out in the University. Khulna University has established itself as a centre of excellence in the arena of higher education in Bangladesh. In the year 2016, the Institute of Education & Research (IER) will start its academic activity, with the plan to increase the number of disciplines to 32 for accommodating 11,095 students by the academic year of 2018-2019.

Uttara University (UU) [4]

Uttara University is a leading private university in Bangladesh, established in 2003. Uttara University, being the first private university in Bangladesh has come up to take the challenge and opened the Department of Physical Education (DPE) in 2003 under the school of Education and Physical Education. The aim is provide skilled and educated Physical Education (PE) Teachers. DPE offers one year Bachelor of Physical Education (B.P.Ed) and one-year Master of Physical Education (M.Pedi) programs.

Vision of UU: The University looks forward to having a transformational impact on our society with international quality service rendered by our students imbued with the spirit of humanity, professionalism and holistic academic excellence.

Mission of UU:

- Within the context of lifelong learning, the university will build up its national and international reputation for innovative student-centred programs that enable students from diverse backgrounds to achieve their educational goals.
- The university is committed to building up academic excellence through curriculum, teaching, scholarship and services designed to help build up knowledge based society by ensuring quality education.
- Tailoring the moral values and nurturing latent power of students, they will be facilitated to place on the job market in such a manner that is ethically justified, religiously testable, culturally harmonious and intellectually competent.

Literature Review

Four level evaluation models depend on- Reaction, Learning, Behavior, and Results. Feisal-Schmitz Technical Taxonomy by Kirkpatrick's in 2004 [5] identifies determinants of Intended Learning Outcomes as identified by Judge, Solve, Explain, Compute, and Define as shown in Table-1.



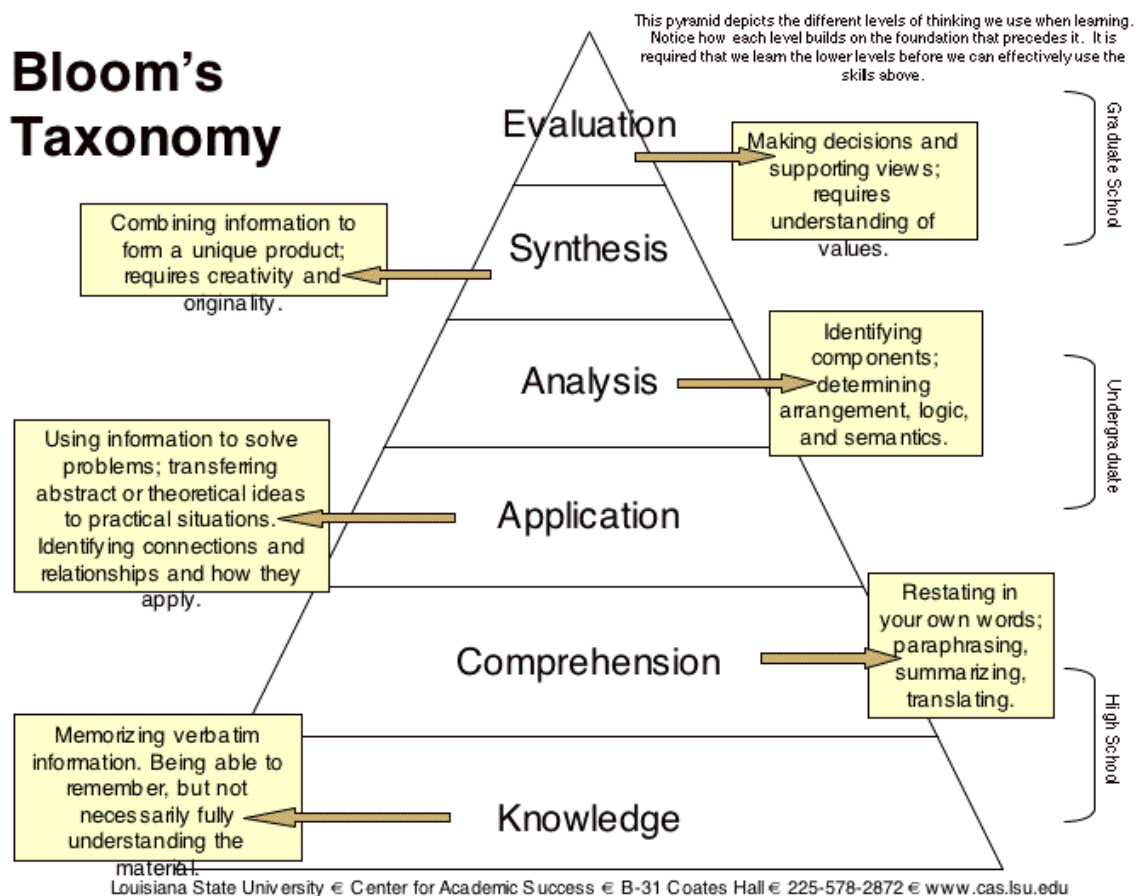
Table-1

Judge	To be able to critically evaluate multiple solutions and select an optimum solution
Solve	Characterize, analyze, and synchronize to model a system (Provide appropriate assumptions)
Explain	Be able to state the outcome/concepts in their own words
Compute	Follow rules and procedures (substitute quantities correctly) into equations and arrive at a correct result
Define	State the definition of the concept or is able to describe in a qualitative or quantitative manner.

Source: [5]

Factors of Bloom’s Taxonomy (new version, 2002) include Creating, Evaluating, Analysing, Applying, Understanding and Remembering [6]. In Figure-1 we illustrated Bloom’s Taxonomy.

Figure-1: Bloom’s Taxonomy

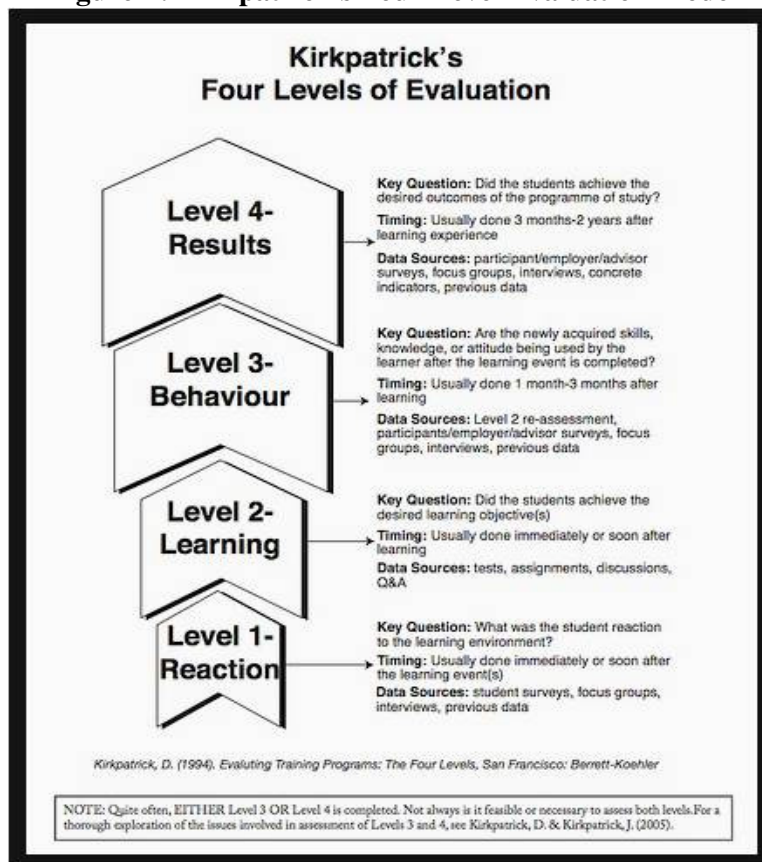


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A lesson is a guide Map or a blue print of action in the class for one period. He commented that lesson planning is a part of pre-active phase. Health of nations depends on the literacy rate and the quality of higher education system, which is closely linked with the gross domestic product of the country [7]. Kirkpatrick Learning and Work Environment is a Four Level Evaluation Model focussing on results, performance, learning and motivation [8]. Figure-2 illustrates Kirkpatrick's Four Level Evaluation Model.

Figure-2: Kirkpatrick's Four Level Evaluation Model

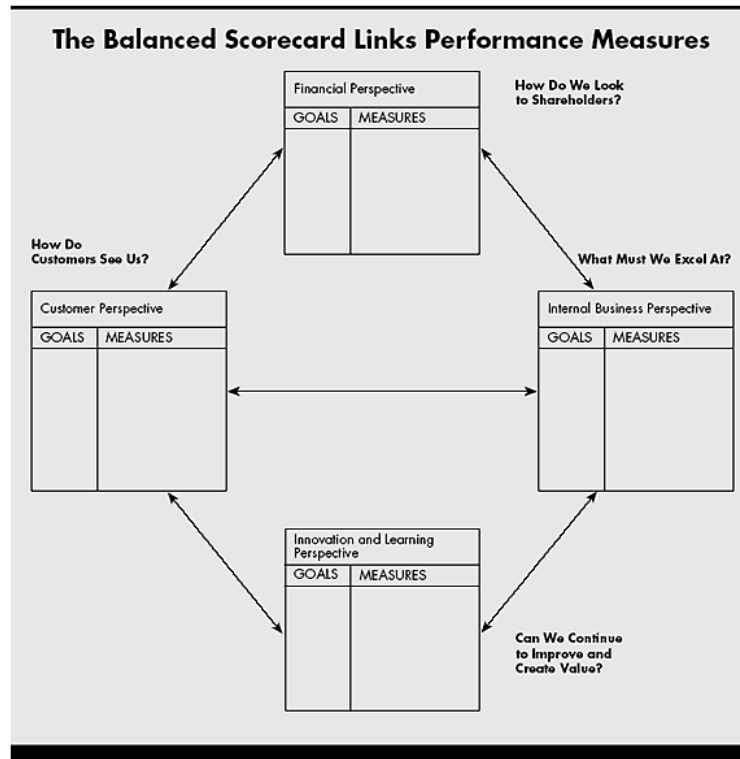


Source: <https://petersbrian.files.wordpress.com/2012/02/kirkpatricklevels-of-evaluation.jpg>

This is essential for successful learning outcomes. Balance Score-Card used from Four (4) perspectives as students, industry stakeholders, accrediting bodies and government are considered as our customers (internal and external), if we apply the market demand and supply concepts [9]:

- Customer - How do customers see us?
- Internal Business - What areas we must excel?
- Innovation and Learning - How can we continue to improve?
- Financial - How do we look to stakeholders?

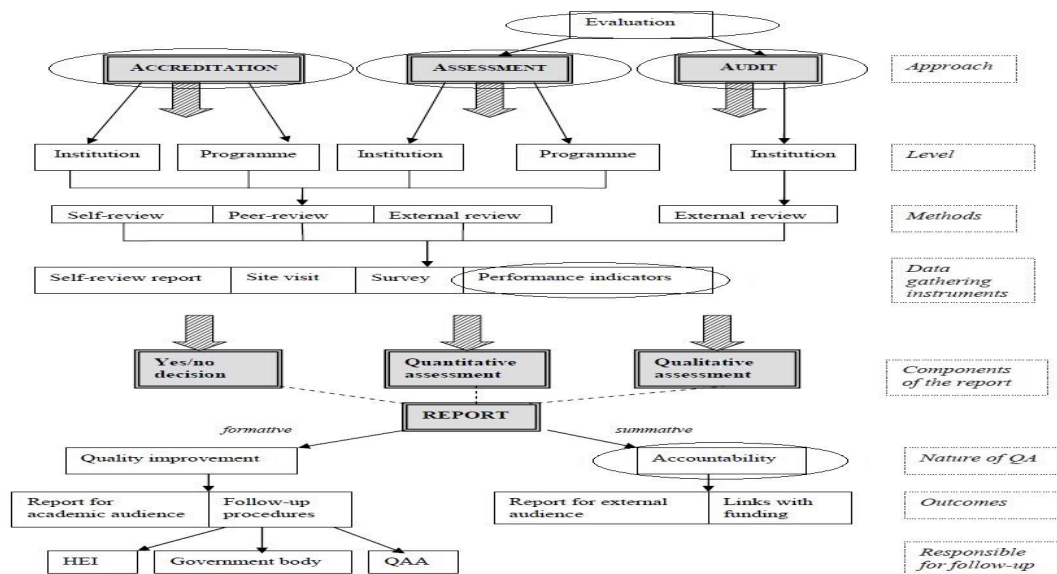
Figure-3: Balance Scorecard



Source: https://hbr.org/resources/images/article_assets/hbr/9201/92105_A.gif

The six key elements of QAS in Higher Education are illustrated in Figure 4, which are essential for standing of a university in context of teaching and research.

Figure 4: Quality Assurance in an International Higher Education Area

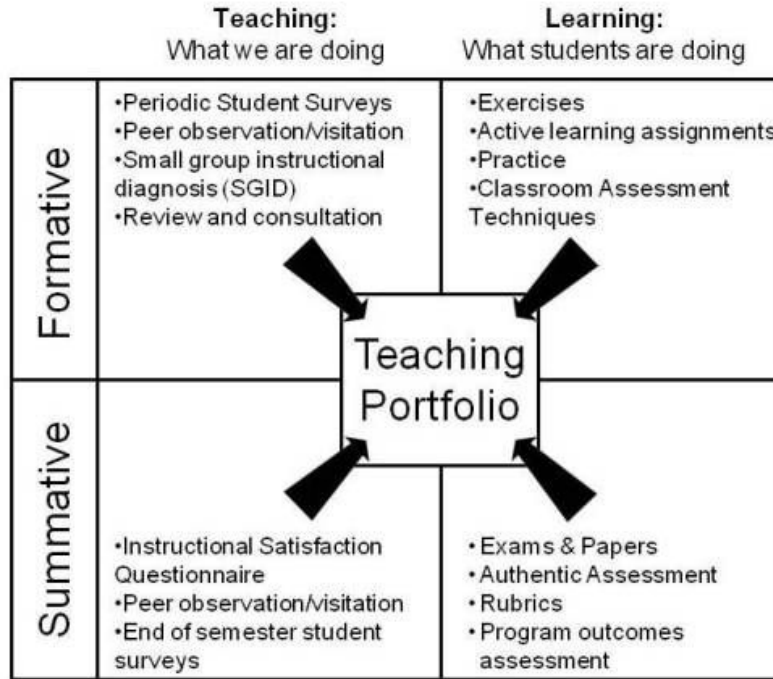


Source: [10]

Similarly, designing quality and types of assessment and student assessment process is essential to be linked with unit and course/ programme learning outcomes. Figure-5 illustrates the six steps to student learning assessment process to ensure positive learning outcomes.

Figure 5: Student learning assessment process

Modes of Assessment of Teaching and Learning

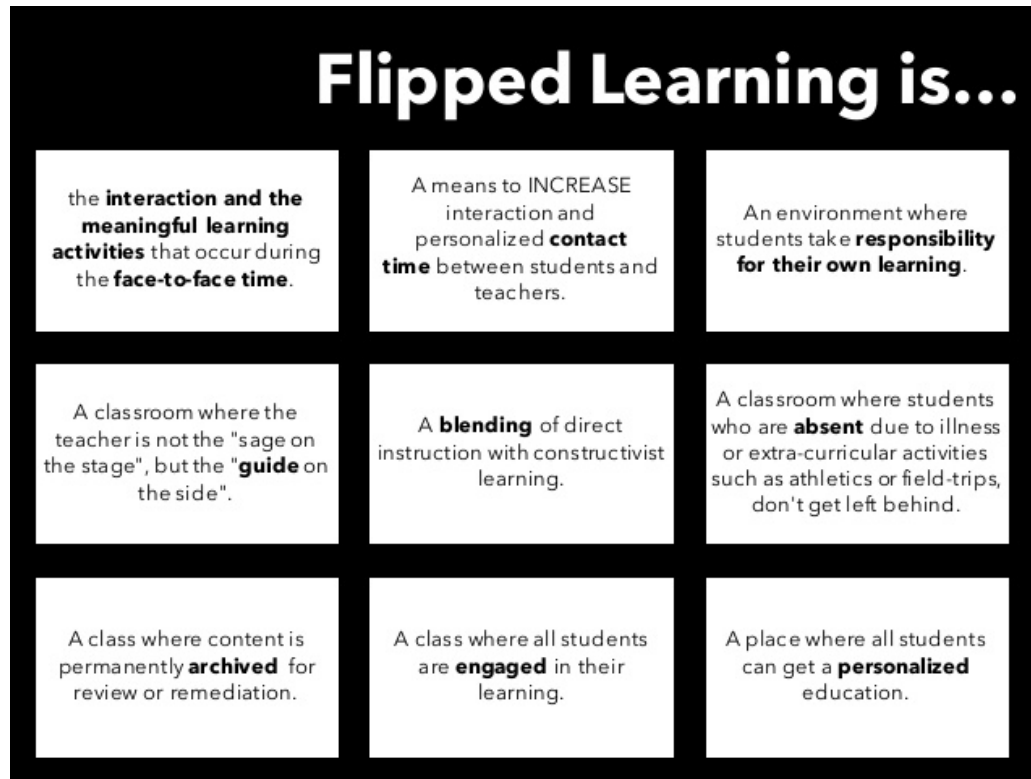


Prepared by the Office of Faculty Enhancement

Source: <https://s-media-cache-ak0.pinning.com/736x/fb/fe/a3/fbfea35ece5618e2e36c50756eeb15a7.jpg> (viewed on 1st March, 2017)

The Flipped classroom model has four pillars: flexible environment, learning culture, intentional content and professional educator. The main aim is to help the students by creating flexible spaces, where the student choose to learn what and where they want, adopting a student centered approach [11]. Students, explore ideas in depth, construct knowledge, participate and evaluate their understanding, which helps to develop a conceptual understanding of the content, and a demanding role of the educator, with providing continuous feedback by assessing the student work and learning outcomes [12]. Figure-6 illustrates the Flipped Learning process.

Figure -6: The Flipped Learning



Source:<https://image.slidesharecdn.com/flippedclassrooms-150712022812-lva1-app6892/95/flipping-classrooms-for-deeper-learning-6-638.jpg?cb=1436741488> (viewed on 1st March, 2017)

It is emphasized that in the industrial setting, highly educated workforce and good human resource management practices have been known to increase company's ability to innovate and adapt to global competition[13].The aim of this paper is to investigate whether students are getting international benchmarking modern education, timely information regarding course outline and assessment requirements, lesson plan, weekly reading materials, go through continuous assessment process and logistic support, timely return of assignment task with constructive feedback. Further, Australian Qualification Framework [14] is structured around levels of descriptive criteria, with formal qualifications aligned to appropriate level of degree could be considered in following Table-2:

Table -2: Australian Qualifications Framework

AQF Levels	Description	Qualifications	Time-years
10	Graduates at this level will have systematic and critical understanding of a complex field of learning and specialised research skills for the advancement of learning and/or for professional practice.	PhD	3 - 4 y
9	Graduates at this level will have specialised knowledge and skills for research, and/or professional practice and/or further learning.	Master's degree (extended) Master's degree (coursework) Master's degree (research)	3 - 4 y 1 - 2 y 1- 2 y
8	Graduates at this level will have advanced knowledge and skills for professional/highly skilled work and/or further learning.	Graduate diploma Graduate certificate Bachelor honors degree	1- 2 y 6 months to 1 y 1 y
7	Graduates at this level will have broad and coherent knowledge and skills for professional work and/or further learning.	Bachelor degree	3 – 4y
6	Graduates at this level will have broad knowledge and skills for paraprofessional/highly skilled work and/or further learning.	Associate degree Advance diploma	1.5 - 2 y 1.5 - 2y
5	Graduates at this level will have specialised knowledge and skills for skilled/paraprofessional work and/or further learning.	Diploma	1- 2 y
4	Graduates at this level will have theoretical and practical knowledge and skills for specialised and/or skilled work and/or further learning.	Certificate IV	1 y
3	Graduates at this level will have theoretical and practical knowledge and skills for work and/or further learning.	Certificate III	6 months
2	Graduates at this level will have knowledge and skills for work in a defined context and/or further learning.	Certificate II	Non Tertiary
1	Graduates at this level will have knowledge and skills for initial work, community involvement and/or further learning.	Certificate I	Non Tertiary

Source: <http://www.aqf.edu.au/>(viewed on 1st March, 2017)

Research Methodology

This study is based on secondary sources of data from the two universities. Qualitative nature of discussions were done in this study. Two programs were chosen for this study from the two universities. Agro-Technology Discipline program from Khulna University and Physical Education program from Uttara University. Time of the study was from January 2014 to September 2016. Assessment of the applicability of the three models will be undertaken for the two programs. (i) Bloom's Taxonomy, (ii) Kirkpatrick, and (iii) Feisal-Schmitz Technical Taxonomy.

Self-Assessment in Practice: Universities of Bangladesh³

Tertiary education in Bangladesh, currently, has been facing many deeply rooted and intertwined challenges. These include, inadequate enabling environment for improving the quality of education, teaching and research, weak governance and accountability, poor planning and monitoring capacities, and insufficient funding. All these drawbacks can only be mitigated by developing a quality culture and ensuring good practices in higher education institutions (HEIs).

³ <http://iqac.daffodilvarsity.edu.bd/index.php/documents/books>

Following the recommendations made in the Strategic Plan, the Ministry of Education prepared and launched in mid-2009 the Higher Education Quality Enhancement Project (HEQEP) with the financial support of the World Bank. Against this backdrop the Ministry of Education, the UGC and the HEIs established Institutional Quality Assurance Cell (IQAC) almost in every public and private university to develop a mechanism for the systematic review of study programs, to ensure quality teaching-learning, research, knowledge generation and support services standards at an acceptable level.

Self-Assessment Concept refers to a systematic process of evaluating the various aspects of institution or academic programs including the major Quality Assurance (QA) areas in respect of national qualifications framework and criteria whether quality standards are being met. For the purpose of further improvement SA collects information and evidences from the stakeholders, reviews those and identify the weaknesses and areas for further improvement to enhance quality of teaching and learning in higher education. SA does not mean that evidences of quality education are not available. It provides direction to continuous improvement through gradual internalization of the standards and good practices. SA examines the state of practices and quality using a well-structured survey framework, and serves as a preparation stage for external peer review and validation for approval and accreditation, and addresses the following issues [15]:

- What does the university do to provide education ?
- Whether the university does the right things to provide education ?
- Whether the university is doing the right thing in the right way ?
- Has the university clearly defined goals to achieve ?
- Whether the process guiding the university is adequate to achieve the goals ?

Guided Principles of Teaching Learning process

Teaching learning constitute the core of education. It is the responsibility of the educational institutions and the educator, to ensure effective teaching learning for quality in education. For the purpose of effective teaching learning following factors are very critical:

1. *Quality Staff*: It is essential to ensure that the staff of all categories including academic, support, technical and administrative are adequate in number and have the skills to meet the requirements of academic standards and strategies of teaching and learning.
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2. *Appropriate teaching learning methods:* Teaching and learning method, sets the stage for student learning outcomes. Efforts in this area pay great dividends in terms of attainment of learning goals and quality of education as well. Attainment of learning goals depends on the role and involvement of students and teachers in the process. Teachers need to be diligent in transferring new knowledge to the students effectively so that the goal of teaching and learning process is achieved. Teachers should use innovative teaching techniques to make the students curious, focused, engaged and interested to learn the subjects taught, and are able to maintain a scholarly approach for engaging students in creative and innovative academic activities.

3. *Use of Lesson Plan:* Use of lesson plan is a growing practice in higher education teaching and learning internationally. It specifies the subject content to be taught, learning objectives and assessment of that learning for each class.

4. *Integration of Information Technology (IT):* In this age of information technology, all work and study has become increasingly IT centric. As such, IT integration in teaching is very critical for quality in education. IT integration in teaching and learning will make it a lot easier, attractive and more effective to communicate ideas and complex subjects meaningfully in classrooms. In addition, use of IT in teaching will encourage students to use e-contents to enhance learning, access e-resources for studying and research, use information technology for academic preparation, assessment tasks and problem solving.

5. *Focus on critical thinking and originality:* Teaching and learning in higher education must address the higher order of learning in educational domain, i.e., application to creative innovation. At the tertiary level, heightened cognitive skills are very important. Efforts should be made to develop the skills of original thinking and creative faculty.

6. *Skill Development Mechanism:* It is required to keep in mind that education is all about to gain a set of skills. Such skills will make the graduates competent to face the reality of life, be employment ready, to develop the attitude of lifelong learning and to contribute to the socioeconomic development of the country. As such, teaching learning activity must not be confined within the classroom environment, as it is not sufficient to develop the desired skills. Universities must have a comprehensive skill development plan incorporating the curricular, co-curricular and extra-curricular activities like sports, leadership, engaging with the community and making a difference.

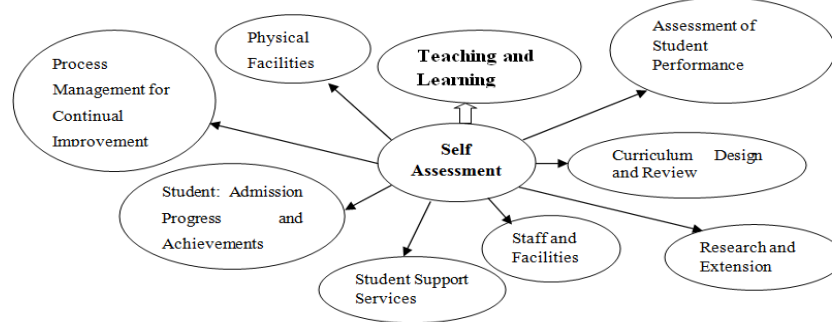
- Standard 5-1: Teaching-learning practice is interactive, motivating, promoting sense of responsibility and commitment.
- Standard 5-2: Teaching-learning practice involves practical evidence, initiates critical thinking, and inspires students to apply acquired knowledge in the real life situations focusing on higher order of learning.
- Standard 5-3: Teaching-learning practice integrates the use of technology and also should provide students with opportunities to use these skills in academic preparation, both within and outside of the classroom
- Standard 5-4: Teaching-learning practices provide enough scope to integrate curricular and extra-curricular activities for intended skill development.
- Standard 5-5: The teaching-learning methods and opportunities must ensure that the identified skills are transferred to students.
- Standard 5-6: Use of lesson plan should be formalized in teaching-learning practice with proper documentation and access.

Use of Lesson plan

Lesson plan is a growing practice and a key component of teaching learning process. It specifies the subject matter to be taught, learning objectives and assessment tasks of that learning linked to the learning outcomes, for each class. As a result, at the beginning of a session students

become very clear regarding what will be taught, how will it be taught, how will the attainment of learning be assessed and subjects they are supposed to learn. Documentation of lesson plans will enable one to determine the level of students' "learning in any particular course and help the students to plan for learning of a course at the next level of academic life. Based on the observations during the peer review visit by the Review Team following aspects were judged using the given rating scale related to teaching and learning as illustrated in Figure -6.

Figure- 6: Self-Assessment in teaching and Learning



Source: Developed for this study

Analysis of Findings: The key findings of the two case studies is discussed below:

Case Study 1: Khulna University [3]

1. *Governance:* The review team feels that program objectives need to be more specific, measurable, achievable, realistic and time-bound (SMART). Faculty members are not happy with the staff recruitment and performance appraisal process.
2. *Curriculum:* Content, Design and Review: Modernization of contemporary curriculum of the discipline is the need of the time. The faculties and students also stressed for inclusion of courses like research methods, project proposal writing and scientific report writing.
3. *Teaching-Learning and Learning Assessment:* Academic staff members are not using standardized lesson plans.
4. *Institutional Structure and Facilities:* Students are not happy with the central library facilities in terms of availability of books and journals, time schedule and spaces.
5. *Faculty Academic and non-Academic Staff:* The number of academic staff in the discipline is not adequate for important areas of specialized courses, for example Entomology. The discipline is deficient in non-academic support staff.
6. *Student Support, Counseling and Development:* Formalized and standard system of monitoring the progress of students throughout the program is not available in the discipline.
7. *Research and Extension services:* The research projects should be applied in the context of local settings. It is observed that the extension service is not that rich in the discipline.
8. *Process Control:* Internal Quality Assurance and Continuous Quality Improvement are weak. Suggestion is that *Peer Review and Observation* on evaluating effectiveness of teaching may be included not only as a university policy for promotion criteria. The discipline may introduce taking student feedback, which is essential to identify weaknesses in the teaching/learning system and to improve the teaching capacity and quality of the teachers.

Case Study 2: Uttara University [4]

1. *Governance:* The vision, mission statement needs to be more specific. Program specific

learning outcomes need to be defined for each subject.

2. *Curriculum Design and Review*: There is a gap between the theoretical knowledge and the industry requirements. Curriculum needs to be addressed the program objectives and program learning outcomes.

3. *Student*: Admission, progress and achievement needs to be improved. English Language skills should be a pre-requisite for entry. In the B.PED program, the medium of instruction is in Bengali language.

4. *Physical Infrastructure Facilities*: Gymnasium, Sports oval and soccer field, swimming pool and gymnasium facilities for physical education degree along with digital classroom and on-campus Wi-Fi connection.

5. *Teaching, Learning and Assessment Methods*: It was found that numbers of permanent faculty staff were low, clearer and focused based Teachers" and students" quality for achieving ILOs, supportive teaching technologies required for teaching and learning environment and lesson plan must be improved.

6. *Student Support Services*: It is essential to organise various student support services. For example, extra-curricular activities, office facilities for placement and career planning, alumni association should be strengthening, and student-learning centre to help students with learning difficulties in English, IT, math's and science.

7. *Staff and Facilities*: The University does not maintain any official Key Performance Indicators (KPIs) for promotion to the higher positions for staff and faculty members.

8. *Research and Extension Services*: There are insufficient research fund and facilities from the university. It is therefore necessary to collaborate with international agencies and universities in teaching and research. Faculty staffs are not encouraged to submit in Scopus listed journals that charge a fee for publication, which is a disincentive.

9. *Process Management and Continual Improvement Student*: It was observed that little provision to incorporate the feedback from the stakeholders along with formal grievance management system in practice and process was absent.

Further, 'The Post Audit Improvement Plan (PAIP) should embody a design that is comprehensive, highly structured, specific, and focused'. The PAIP plan includes the following [17]:

- Identify affirmations and recommendations made by peer auditors according to the nine quality assurance areas for Bangladesh
- Identify strategic interventions and timelines. Where a target requires a longer timeline or is set to be achieved at least six months after the date of the Improvement Plan, milestones to be prepared
- Prepare a budget (if relevant and required) and identify how this is to be obtained.
- Establish specific bi-annual and annual reporting and verification need and timelines
- Prepare a summary for submission to University Syndicate/VC's Office and/or QAU (pre implementation and at periodic intervals)

Data Analysis

Data was analysed using qualitative and quantitative methods. This paper will also discuss and answer the question as to Australian Qualifications Framework for Higher Education and its applicability in Bangladesh. In order to enhance the competence of its students, the paper will investigate whether both Universities encourage independent and critical thinking and help the students develop holistic perspectives, contemporary domain knowledge and hands-on skill-sets for employability. The results of the study found that both the universities are trying to improve

teaching-learning system. However, it is far behind the international benchmark standards. Situation of the public university (KU), which was studied, was worse than the private university (UU). Still both the universities are using traditional system of teaching-learning system based on memorizing rather than conceptualization and critical thinking.

Bloom's Taxonomy of learning domains is hardly practiced in Khulna University while in Uttara University respondents of survey among the faculty members never heard about the other methods. Moreover, Kirkpatrick's Four-Level evaluation model was never used in both the universities. Feisal-Schmitz Technical Taxonomy was also never used in the assessment process. Course curricula of both the universities are lacking in industry related application and real life scenario with practical exposure. For example, for offering BBA and MBA degree in Finance, no practical exposure to financial institutions and stock market trading was observed. The study recommends that modern teaching-learning system should be established, for which lesson plan should be prepared and class lecturers must be more realistic in terms of application of theory to real world examples. Graduates should be work ready considering demand and needs of the future job market, as per the Australian Qualification Framework, which could be adapted to suit Bangladesh economy.

There is an urgent need for establishing a National Accreditation Council. Further ranking system of the educational institutions may be established by the public sector to enhance capability and quality of the higher educational institutions. Indexing for research-based journals should be initiated in Bangladesh by UGC. To develop a perfect model in the educational arena we can use Public-Private-Foreign (PPF) collaboration. For example, in Bangladesh we can try to establish a branch of Asian Institute of Technology or University of Delhi. For life science or medical education, we can try to set up branches of public Universities of Thailand or Indian Institute of Technology Bombay (IIT-B). The faculty members and students should synchronize arranging proper teaching-learning system with research, collaboration, extension, and consultancy and community engagement. They need an international benchmarking. Quality of education is determined by the market demand and supply factors, which is a continuous process of meeting the needs of the domestic and global market.

5.4 Regional Cooperation

Under BIMSTEC, a regional body could be developed as an educational framework like ASEAN University Network. As such, Govt. of Bangladesh may give proposal to the BIMSTEC for taking initiatives for regional cooperation in the education sector. There has to be more cooperation and collaboration between higher education institutions under the SAARC umbrella to enforce quality in education, when South-Asian scholars are contributing to higher education around the world. Further, INQAAHE, IAU, EURASHE etc. may help higher educational institutions to improve quality in planning and delivery of the educational programs. Cross-border higher education in the country could be encouraged if the higher educational institutions are well recognized by the QS ranking system or similar type of ranking system; otherwise there is a chance of bureaucratic corruption where the institutions will be business centric focusing on super normal profit. Like Gresham's law - bad money drives out good money, similarly these corrupt institutes may create problem for the educational institutes. Regional cooperation through BIMSTEC may be considered in the educational sector where there is immense scope for development. Besides creating white-collar workers, blue-collar workers may be prepared by the universities for which course curriculum should be designed through using business process reengineering to cater to the future need of the industry of the countries.

Table 3: Improvement Plan Template based on findings

A	B	C	D	E	F	G	H	I	J	L	M
1	QA Area	SAR & EPRR Recommendation	Proposed intervention	Target/goal	Mile Stones	Fund required/ not required	Proposed amount	Sources of fund	Person in Charge	Verification Body (in most cases will be IQAC Director)	Remarks
2	Governance	1. 2.									
3	Curriculum Content Design & Review	1. 2. 3.									
4	Student Admission, Progress and Achievements										
5	Physical Facilities										
6	Teaching - Learning and Assessment										
7	Student Support Services										
8	Staff and Facilities										
9	Research and Extension										
10	Process Management & Continuous Improvement										
11	Internationalization										
12	Class Auditing										
13.	Alumnus Support and contact										
14	Co-curricular activities										
15.	Humanistic approach										

Source: Collected for this paper from various sources and [17]

Case study of Daffodil International University (DIU): Best practices of a private university⁴

Accreditation is used in higher educational institutes for “The process of external review”. IQAC of DIU will work as a linkage between accreditation council and UGC and worked at program level, Departmental level, faculty level and Institutional level of the university. Out of 14 entities of DIU undergoing self-assessment, eight entities of DIU in the 1st Phase completed all

the steps of self-assessment [15]. All 8 entities successfully conducted five segments survey on Employer, Alumni, Current students, Academic faculties and non-academic staff. On the basis of the findings of external peer review the following criteria set was applied by QAU of UGC: Governance, Curriculum Design and review, Student: Admission and Progress, Physical facilities, Teaching learning and assessment methods, student support system, Staff and facility, Research and extension, Process management and continual improvement.

Findings of the self-assessment are vital for the internal and external review process. As such, IQAC directed eight entities to start execution of their improvement plan from first of January 2017 to implement four years improvement plan-cycle so that active action of the planning can enforce into reality. IQAC prepared uniform lesson plans and arranging training of faculty members-non-academic and students for capacity building through outcome based teaching-learning system and guiding research work for faculties, students and doing academic audit. Besides, IQAC jointly organized with different departments' international workshop on Course curriculum design. In the second phases, DIU already started self-assessment and evaluation of five (5) entities⁵

Super Goal of the IQAC of DIU⁶: To meet the criteria of proposed National Qualification Framework, get National and International Accreditation and benchmarking with the best universities in the world. Based on market demand and supply for enhancing skill and employable of the students, IQAC of DIU is trying to prepare and implement strategic planning for good governance.

⁴ news.daffodilvarsity.edu.bd/927-workshop-on-“future-initiatives-to-eight-departments-epr-report-perspective”-held-at-daffodil-international-university.html (viewed on 1st March, 2017)

⁵ <http://iqac.daffodilvarsity.edu.bd/index.php/news-events/90-workshop-on-self-assessment-process-for-departments-in-second-phase-held-at-daffodil-international-university> (viewed on 1st March, 2017)

⁶ <http://iqac.daffodilvarsity.edu.bd/index.php/outcome-strategies/about-iqac> (viewed on 1st March, 2017)

IQAC is focusing on the following: outcome based curriculum, guidance, excellence of faculty, transforming students as human capital, infrastructure facilities, research and learning-teaching environment, improvement of assessment processes, and applicability in knowledge management. Initially the accreditation will promote general understanding amongst the stakeholders (Table-4) of the Quality Assurance for higher education in the country and thereafter, IQAC's role will gradually become facilitator as an internal reviewer for the university.

Table- 4: Stakeholders Analysis

Stakeholder	Type	Expectation	Contribution
1.Donar	HH	Effective result	Funding
2.Infromants	HH	Benefits from the teaching-learning and research	Adequate Information
3. Employer	HL	Technology driven education	Continuous support
4. Representative of Local Govt.	LL	Desired result	Logistic support
5.Distribution Chanel	HL	Proper marketing and feedback about alumnus performance	Supply Chain Management
6.Researcher	HH	Methodology and use of Technology	Achieve goal
7.Research associate and Research assistant (student)	HL	Support Technology	Participation and involvement
8.Assessor	HL	Quality product	Promotion of teaching and research work
9.User	HH	Market driven quality and user friendly product	Acceptability of the product
10.Ministry of Education	LH	Raise the issue at the policy level	Share their experiences
11.University Authority	HH	Continuous improvement of teaching-learning ,research and Development (R & D)	Approval of the new thoughts of education ,research work and employability skill and archiving of research findings and dissemination

Source: Developed for this paper

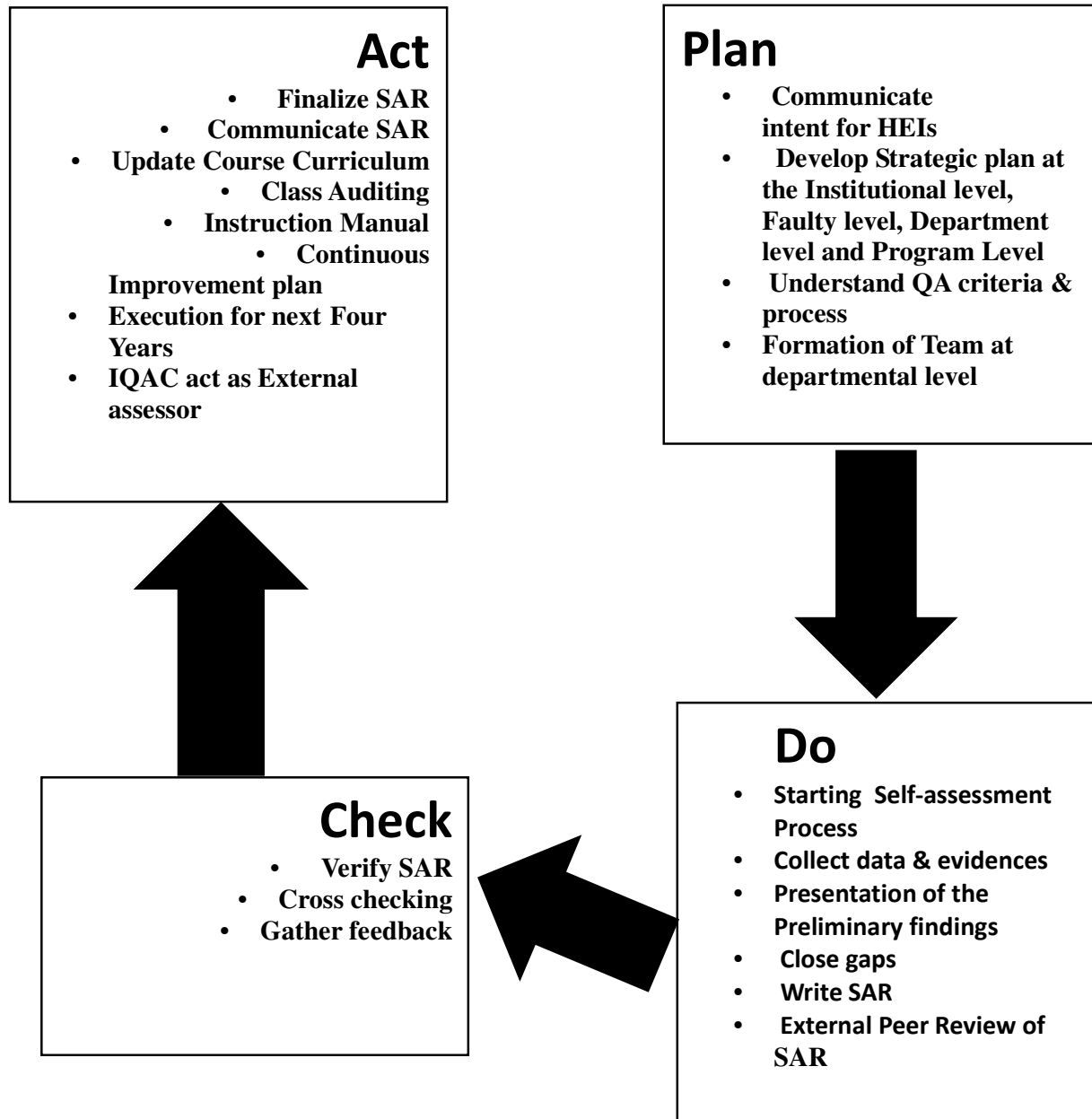
Model Implication

WAY= Continuous improvement

DETERMINING FACTORS= Market Demand and Supply Forces

END RESULT=Employability + skill

Figure-7: PDCA Model



Source: Developed for this paper

Discussions

UGC, Bangladesh monitors higher educational institutions. Professional Bodies, International accreditation councils are also working in some higher educational institutes of Bangladesh. Bangladesh Accreditation Council Bill 2017 was passed for which it is being hoped that the accreditation council will start functioning within six months. When it will start we hope that like INQAAHE and [European Association of Institutions in Higher Education will work independently and with corporate governance](#). INQAAHE is a QA community, with shared interests, a common language and an understanding of how things are done with regard to a very

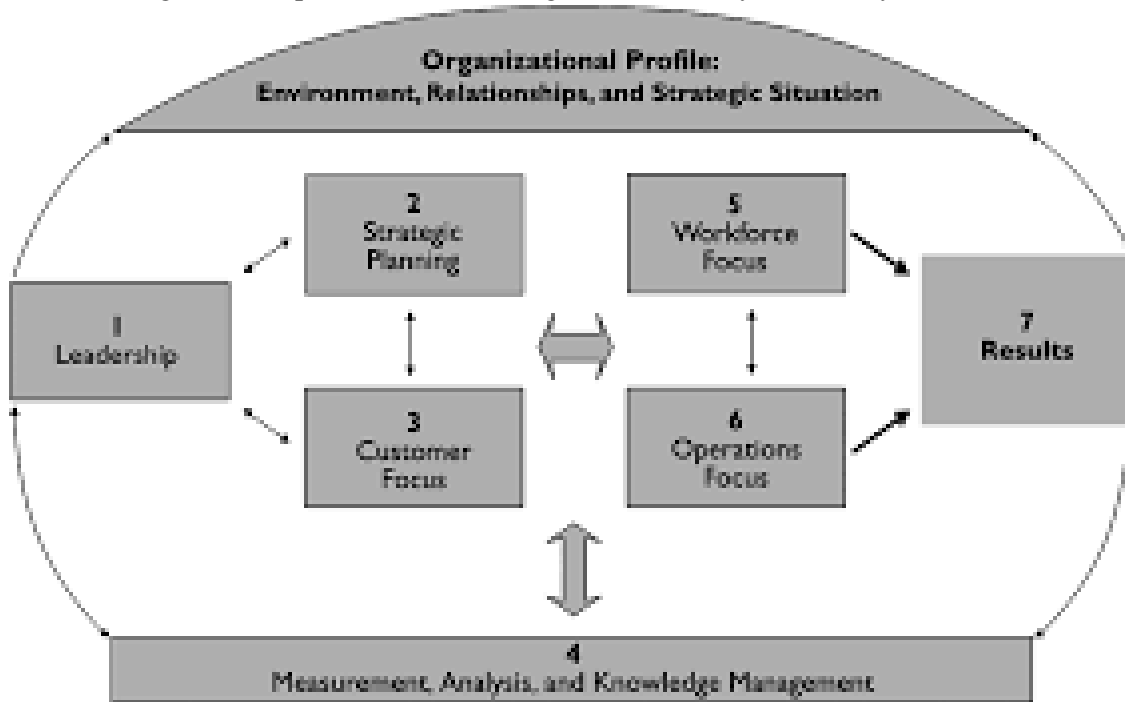
specific field of work. It provides a forum for the discussion of global issues that go beyond national or regional boundaries, such as cross border education. Members have the opportunity to learn from what others are doing, both from their successes and their failures, and thus have now set the ground for the development of a QA profession [18]. A transparent, multidimensional classification system of instruments which are designed to benchmark higher education institutions on research and innovation, teaching and learning outcomes, services to society, level of internationalisation and mobility, governance, study fees and study environment, student and stakeholder involvement, etc., may help identify and make visible such diversity.[19]. However, ranking system and journal indexing process were not done. Indian higher education currently the third largest in the world, is likely to surpass the US in the next five years and China in the next 15 years to be the largest system of higher education in the world. With nearly 140 million people in the college-going age group, one in every four graduates in the world will be a product of the Indian education system.

Regional Rankings: Indian government identified nearly 22 parameters under five major heads, several of which are similar to those employed globally such as excellence in teaching, learning and research. However, there are a few, which are India-centric. Country-specific parameters relevant to the Indian situation include regional and international diversity, outreach, gender equity and inclusion of disadvantaged sections of society. Participation in the India Rankings 2016 was voluntary. The other ranking are:

- The ‘*Shanghai Ranking*’, which started in 2003 with Chinese governments’ backing, was designed to provide a global benchmark against which its universities could assess their progress.
- *QS World University Rankings* published by QS Quacquarelli Symonds (QS) and Times Higher Education (THE) – 2004-2009, then independently.
- *QS Star* is a rating system that allows students to get a wider picture of an institution’s qualities, looking at everything from the employability of graduates, to sports facilities and community engagement.
- Core Criteria: Teaching, Research, Employability, and Internationalization
- Advanced Criteria: Culture, Innovation, Engagement, and Inclusiveness

Regional University for Quality enhancement is shown below in Figure: 8 which was Suggested [16] for quality enhancement.

Figure-8: Proposed BIMSTEC Regional University for Quality enhancement



Source: <http://www.up.edu.ph/asean-integration-and-quality-assurance/> (viewed 1st March, 2017)

Recommendations:

- Needs of the country should be identified, to set up quality indicators at the institutional level to add value in Global value chain
- Under BIMSTEC a regional body may develop an educational framework like ASEAN University Network .As such Govt. of Bangladesh may give proposal to the BIMSTEC for taking initiatives for regional cooperation in the education sector. Moreover, considering Australian Qualifications Framework Bangladeshi Educational Qualification framework as per local need may be considered. Further, INQAAHE, IAU, EURASHE etc. may help higher educational institute to improve quality as a networking
- Sufficient Number of National Assessor for assessing Quality education will have to be appointed
- Learning outcome of each course curriculum must be aligned with Bloom's taxonomy.
- Learning Diary must be maintained by the course Instructor along with course fine.
- At the institutional level quality of Administration and management should be improved
- Physical and infrastructural development of Higher educational institutes where underdevelopment prevails ought to be done without delay
- At the institutional level QS ranking audit may be done for improvement as well as global recognition
- Benchmarking for the Internationalization should be developed, considering both academic and management diversity at Program level, Department level and Institutional level.

- All sorts of taxes including VAT and direct taxes should be withdrawn related to remitting fund for doing research work/publications at highly recognized indexed journal and good impact factor for at least up to 1500 EURO or equivalent.
- Ranking system of higher educational institutes should be arranged by the Ministry of Education, Govt. of Bangladesh.
- To develop methodology and improve quality of teaching economics and business at HEI's; it is essential to introduce lab-based business teaching with simulation, fieldwork, industry visits for 40% of the course, which will meet the objective of applying theory and practice to real life situations, industry need and overall achieve positive student outcomes.
- Research journal published by educational institutes must be indexed by the UGC, Bangladesh.

Conclusions

In order to improve and ensure quality in Higher Education Institutions (HEIs), educational institutions are required to be more responsive to the global changing needs of all the stakeholders. Bangladesh may consider Australian Qualification Framework, which should be adjusted as per Bangladesh's requirements. Accreditation council of Bangladesh should start functioning without bureaucratic mannerism of delay. It is very important for the HEI's to know how well they are doing and how can they do even better to meet the needs of the environmental scanning of HEIs.

A proposed BIMSTEC University must cater to create both blue-collar labour and white-collar labour for meeting the need of the domestic and global environment which may be set up at Bangladesh. For foreign students, additional support system should arrange by the higher educational institutions such as affordable accommodation, including food, sporting activities, healthcare facilities/first-aid, and gymnasium, community engagement, and heritage, cultural and social programs and removing language problems as well as close to all conveniences. To develop a perfect model of quality in the higher educational arena we can use PPF. Love for motherland, patriotism and refrain from any terrorist activities of the students are very important.

Employability skill with creativity and innovative nature is being required. Strong political determination by the leaders of the BIMSTEC member countries will help to cater the need in improving quality higher educations at this regional arenas. For this reason with visionary zeal, missionary enthusiasm guided by super goal to enhance quality education at higher educational institutes and implementation with focused based strategic planning with collaborative effort are much being needed.

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