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ASIA-PACIFIC QUALITY NETWORK

CAPACITY BUILDING FOR NEXT GENERATION QUALITY ASSURANCE IN HIGHER EDUCATION

(An anthology of selected papers of APQN Conference in Nagpur, INDIA)

March 22– 25 2018

Nagpur, India

Asia-Pacific Quality Network

CAPACITY BUILDING
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Capacity Building for Next Generation Quality Assurance in Higher Education: materials of APQN Conference and AGM , 2018. –133 p.
The Annual International Conference of the Asia-Pacific Quality Network (APQN) "Capacity Building for Next Generation Quality Assurance in Higher Education" was held in Nagpur on March 22-25, 2018.
The papers are grouped under three categories: Excellence in Quality Assurance, New Assessment Methodologies in Higher Education and Internal Quality Assurance in HEIs and are open for review and discussion by any reader, depending on his/her background and interests.

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III. New Assessment Methodologies in Higher Education

FROM THE EDITOR'S DESK

The 2018 APQN Academic Conference (AAC) and AGM were held from March 22-25, 2018 in Nagpur, India. The Conference was hosted by Shri Shivaji Education Society Amravati's Science College and Dhanwate National College, Nagpur. The main theme of the Conference "Capacity Building for Next- Generation Quality Assurance in Higher Education " covered a wide range of important issues which were distributed under 4 sub-themes: (1)Internal Quality Assurance of Quality Assurance Agencies (QAAs); (2)Quality Assurance of Higher Education Institutions (HEIs); (3)Institutional and Professional Accreditation; (4)International, Regional and National Quality Assurance.

The conference was attended by 146 participants from 33 countries and territories who represented QAAs, HEIs and educational authorities of different countries.

This publication includes 18 research papers from 13 countries with representation from various regions. The conference theme of the conference was categorised into 3 main sub themes. The first sub theme "Excellence in Quality Assurance has 5 papers, while second theme - Internal *Quality Assurance in HEIs* has 8 papers and third subtheme *- New Assessment Methodologies in Higher Education* has 5 papers.

Sub theme 1-Excellence in Quality Assurance

Jianxin Zhang and *Xinna   Zhang* of China have authored the paper titled "**Capacity building of APQN QA Cooperation**". The paper highlights the activities and efforts of APQN on capacity building and cooperation in the area of QA since its existence. It suggests the basis of identifying its role, foster mutual trust and faith in QA community, collaboration opportunities by increasing the promotion of quality tasks; strengthen capacity building by enhancing substantive cooperation among members.

Manuel Corpus and *Maria Glenda of Philippines* have authored the paper **"Capacity building best practices and what else went wrong".** The paper intends to provide information about the capacity building activities of AACCUP. The activities of AACCUP specially referring to accreditors' training, retaining etc. The paper also intends to provide details on the paradigm shift of quality assurance from the traditional input-process-focused approach to outcome-based quality assurance and shares ideas on the lessons learned from accreditors' training, the best practices implemented and the problems faced.

Nora Skaburskienė has authored the paper **"Challenges for quality assurance in the European higher education area".** This paper draws attention to recent changes in the European Quality Assurance Area as well as presents challenges that are linked to adapting to the fast-changing environment, also to demonstrating the impact of the agencies' work, thus, justifying the benefits of external quality assurance.

Sam C. K. HO has authored the paper "C**apacity building of peer reviewers".** The paper outlines the experience of HKCAAVQ in providing training and support to peer reviewers. It proposes the directions of change that address the feedback and meet the needs of the peer reviewers in the ever-changing educational landscape. This paper is also a response to the need of strengthening capacity building among the quality assurance bodies and networks from around the world.

Sid Nair has authored the paper "**Capacity building: the changing landscape of higher education - a need to change".** The paper highlights the current changes in higher education sector such as rapid expansion, changing landscape, evolving new ways of delivery etc. It also advises the need to think on the way of quality, quality measurement and / or monitoring.

Sub theme 2- Internal Quality Assurance in HEIs

D. K. Burghate and *D. W. Deshkar* have authored the paper "**Higher Education in India: issues and concerns** ".The paper addresses the issues and concerns emerged in Indian Higher education due to the rapid changes in the world**.** The paper calls for the all round development of body, mind and spirit, through the educational processes in the institutions of higher education in India.

Deepthi C. Bandara has authored the paper "**An insight into the conduct of successful program reviews – the Sri Lankan experience".** The paper addresses the significance of reviewers in the review process since selection, training and capacity building of persons to serve as reviewers.

Dewi Irrawaddy has authored the paper "**Indonesia accreditation agency for higher education in health (IAAHEH) support of the inter-professional clinical practice**". The paper mainly highlights the developmental activities of IAAHEH, established recently to maintain quality of health professional practice and educational issues in Indonesia. It also stresses building awareness, motivation, and concrete actions that will lead to the institutionalization of culture of continuous quality improvement.

Fabrizio Trifiro has authored the paper **"The Quality Assurance of Transnational Education: a UK perspective".** The paper outlines QAA's approach to quality assuring transnational education (TNE) – and hints at the key challenges for the quality assurance of TNE from a provider's perspective, offering advice on how best these challenges can be addressed based on QAA's experience of quality assuring TNE.

Galina Motova and Oksana Matveeva have authored the paper **"The Development Of Institutional And Professional Accreditation In Russia".** The article outlines the recent development of higher education quality processes in Russia with a special focus on different types of accreditation. It covers the changes and development of institutional, programme and professional accreditation in Russia.

Jagannath Patil has authored the paper **"Paradigm Shift In Indian Higher Education Accreditation".** This paper presents a summary of accreditation process of Indian higher education system along with salient features of the revised accreditation framework of NAAC. Paper concludes by suggesting that the revised accreditation framework is a step in the right direction which is likely to usher in a new era of digital accreditation with quality indicators as a base for benchmarking-led quality improvement process in Indian higher education.

Li Yaogang, Chen Jiani and *Zhang Lingfei* have authored the paper **"Quality Assurance of Postgraduate Education BASED on the Third Party Sampling Inspection OF Theses in Shanghai".** The paper outlines the inspection process developed by SEEI. The inspection process introduced improves the efficiency of evaluation process, promotes the scientificity and fairness of theses evaluation, and ensures the quality of postgraduate education.

Sun Ying and *Li Yan* have authored the paper **"The Utilization of Information Technology in Higher Education Quality Assurance in China".** The paper highlights the importance of ICT and its utilization in higher education QA in China and provides details about the background, process, system design and efficiency of the national data platform.

Ye-Jin Oh has authored the paper **"Quality Assurance of Higher Education Institutions in Korea".** The paper explains KUAI's main role focusing on accreditation process, evaluation contents and QA of higher education in Korea. The paper provides statistical data on enrollment and completion rates of students in higher education in South Korea, which are higher as compared to other OECD countries.

Sub theme 3- New Assessment Methodologies in Higher Education

Jasmina Havranek, Vesna Dodiković-Jurković and *Emita Blagdan* have authored the paper **"Agency for Science and Higher Education Internal QA System".** The paper mainly outlines the functioning of ASHE as an independent national agency for external evaluation in higher education and science in the Republic of Croatia. The results of evaluation procedures encourage objective consideration of advantages and deficiencies, as well as joint implementation of agreed improvements in Croatia.

Junping Qiu, Jing Tian and *Xilu Dong* have authored the paper **"World-Class Universities And Disciplines Evaluation: Methods And Results Based On The Evaluation Practice Of Chinese Academy Of Science And Education Evaluation".** The paper is based on the study of building up of world class universities and disciplines evaluation in China and results are explained in detail.

Malini Nair has authored the paper **"Higher Education Institutions (HEIs) Realizing Its Educational Goals".** The study reviews the dimension of educational, institutional effectiveness consecutively with institutional goals. It concludes that a planned assessment linked to institutional goals to ensure the students or learners achieve the program's key learning outcomes.

Vera Silaeva, Aleksandra Zvezdova, Arkady Vladimirtsev and *Irina Dolgikh* have authored the paper **"Independent Assessment of Qualifications as an Element of the National System for External Education Quality Assurance".** The article describes the system of activities on independent education quality assessment of quality concept "system quality – processes quality – results quality". It reviews the procedure for assessment as an element of the system for external education quality assurance and as part of the complex approach towards education quality assessment.

In conclusion:

The varieties of issues discussed in the papers from different countries indicate that research in external quality assurance is now gaining high attention by quality professionals. We hope that new dimensions and practices shared in this publication will be useful to all stakeholders.

We gratefully acknowledge efforts of the conference hosts Dr. D.K. Burghate and Dr. D.W Deshkar in organizing this international event successfully and thereby providing a platform for exchange of issues and good practices.

All the events: plenary meetings, keynotes, panel discussions, parallel sessions, workshop, APQN Quality Award Ceremony – made a great and lasting impression on the conference participants and inspired them to extend collaboration for capacity building and quality assurance in Higher Education.

We sincerely appreciate the efforts taken by all the authors who agreed to revise their original manuscripts as per template provided by the editors. We place on record our sincere thanks to APQN President, Board and also to the publishers for bringing out this new volume in APQN series of conference publications.

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I. EXCELLENCE IN QUALITY ASSURANCE

CAPACITY BUILDING OF APQN'S QA COOPERATION

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Abstract

For 15 years APQN has been devoted itself in capacity building of quality assurance (QA) in the Asia-Pacific Region by establishing an APQN-centered cooperation network, and expanded to global, interregional and regional organizations or institutions. In a way, the expression of cooperation willingness and practice conduction strengthened capacity building of APQN's QA cooperation in such a complicated cooperation network. The network is quite big from the perspective of quantity, while it still needs to improve from the perspective of quality. This paper suggests that on the basis of identifying its role, APQN should foster mutual trust and faith in QA community in the Asia-Pacific Region though organizational culture; provide collaboration opportunities by increasing the promotion of quality tasks; strengthen cooperation capacity building by enhancing substantive cooperation among institution members. Join hands with all the education QA stakeholders from global, interregional and inner-regional organizations to march to a more competent QA community.

Keywords: *Quality assurance; cooperation relation; capacity building.*

Introduction

In 2007, Global Initiative for Quality Assurance Capacity (GIQAC) launched by World Bank and UNESCO, supported the reform of quality assurance (QA) of higher education in developing and transitional countries, assisted and promoted the cooperation among national, regional and interregional QA organizations. As a regional and transnational organization, APQN became one of the main participants of GIQAC and conducted a series of events. In the September of 2016, the "Global Summit on Quality Higher Education: Sharing Values and Fostering Trust Beyond Borders" organized by National Assessment and Accreditation Council (NAAC) in India and co-organized by APQN in partnership with 16 leading QA organizations including networks and quality assurance agencies (QAAs) from the Asia Pacific, Europe, America, Africa and Arab regions. By signing "Bengaluru Statement", they emphasized again the importance of regional collaboration and called upon the close cooperation between Asia-Pacific and other regions to enhance QA capacity together. As one of the most influential and most active educational non-governmental, non-profit organizations in the Asia-Pacific region, the word "network" in the abbreviation of APQN illustrated the cooperation in the region. In the process of constructing this cooperation, APQN strengthened the cooperation capacity in education QA field.

1. APQN's cooperation network from three levels

Regional QA capacity that APQN has been enhancing is not only the capacity of individuals, institutions and organizations, but also even the capacity of countries, regions, and the Asia-Pacific region. As the core of APQN events, service was provided to all the QAAs and higher education institutions (HEIs) in the region. By the method of service, all kinds of cooperations are seen coming and going, which form the cooperation network from different levels but centered by APQN.

1.1 Cooperation with global organizations

Global organizations are those which run at the global level, like UNESCO, World Bank and International Network for Quality Assurance Agencies in Higher Education (INQAAHE). APQN had established a deep bound with global organizations at the very beginning of its inception. The financial assistance and cooperation from international organizations have strengthened APQN's capacity building, and played an important role in the development of APQN. This cooperation was a win-win relation: on the one hand, APQN could obtain assistance and opportunities to strengthen QA recourses, enrich events, increase the power of APQN in the region and facilitate the achievement of its goals; on the other hand, by assisting the development of regional organizations like APQN and cooperating with them, global organizations can find helpers in different regions' tasks and complete their mission to push the global development forward while strengthen regional organizations' capacity building.

1.2 Cooperation with interregional organizations

Interregional organizations refer to International Non-Governmental Organization (INGOs) in different regions. Normally they are alliances or unions of multiple areas or countries, which focus on the regional education development. INGOs always have strong interests in and conduct deep study on education quality assurance. Under the need of development and common pursuit of education, APQN has been keeping close relationship with other interregional organizations and has built a long-term cooperation with some to learn from each other's experience, stressing collaboration of QA capacity building in the region. Regions become the main sectors for global development with the mutual QA bound.

1.3 Construction of inner-regional organizations

More and more the development of international society has been affected by the regional drives. Collaboration among countries within the region is not only the result of globalization but also an effective way to realize mutual assistance and benefit in-between. This kind of regional cooperation among countries is adaptable for organizations, too. As APQN's mission states: "To enhance the quality of higher education in the Asia-Pacific Region through strengthening the work of QA agencies and extending the cooperation between them"(APQN, 2015), QA capacity building and bilateral or multilateral cooperation within the region remain the objections for all the activities that APQN launched. By training the QAAs' staff members and constructing the platform for exchanges, APQN has built a network in the field of education QA area in the region, and this network has brought cooperation with the nodes of QAAs and HEIs.

2. APQN capacity building of cooperation

With the network centered by APQN, capacity building of APQN cooperation in all levels has been conducted. There are many ways to realize the cooperation, which can be divided into two categories of willingness and practice, according to the practice and essence of cooperation.

2.1 Cooperation Willingness

Nearly all cooperations have been built in the basis of willingness. Organizations and APQN achieve the willingness to cooperate and lay a solid foundation for working together by common statements and signing agreements.

2.1.1 Common Declaration

Every corner of the world was bound together by globalization. Education is also the witness of globalization and cries for the cooperation and common effort from countries. As a builder of cooperation platform, APQN has actively advocated for regional cooperation in various occasions, published declaration of cooperation. For example, "*The Bengaluru Statement-2016*" was signed jointly by 16 key QA networks and organizations from Asia, Europe, America and Africa on the "Global Summit on Quality Higher Education: Sharing Values and Fostering Trust Beyond Borders" in India. The statement expressed 9 intents and aspirations (See Table 1). Every item was closely related to cooperation, stressing the willingness and commitment of multilateral cooperation.

Table 1. List of intents and aspirations in Bengaluru Statement (APQN-NAAC, 2016)

No.	Contents
1	Cooperation among QA networks and organizations to dissolve boundaries for quality higher education.
2	Endeavour to foster trust beyond borders in higher education quality assurance
3	Sharing global information resources
4	Promoting values and ethical practices in quality assurance
5	Sharing and promoting good practices
6	Strengthening capacity building
7	Developing strategies and resources for next generation QA in age of technology
8	Resource mobilization for quality assurance
9	Strengthening professionalism in quality assurance

In the January of 2017, in order to support the dissemination of "*The CIQG International Quality Principles: Toward a Shared Understanding of Quality*" made by the Council for Higher Education Accreditation/International Quality Group (CHEA/CIQG), APQN joined CHEA/CIQG as a member, and actively promoted the framework for international deliberation about quality in higher education in order to seek common ground and establish a foundation for understanding quality.

2.1.2 Cooperation Agreement

Besides achieving the willingness to cooperate through common declaration at the global and regional levels, APQN has promoted cooperation with other organizations, and its members by signing a Memorandum of Cooperation (MoC) and a Memorandum of Understanding (MoU) to promote mutual cooperation. The Cooperation agreement is not an exclusive relation which only involves two parties, but a contract can be signed with multiple parties. Under the assurance of contract, cooperation can be more formal and efficient.

According to the records of APQN Annual Report, APQN has signed over 20 MoCs and MoUs with all kinds of organizations and agencies (see Table 2), forming a cooperation relationship to organize activities jointly, conduct conferences and launch project plans. Working with AIM and HEEACT, APQN also published journals, received patents and strengthened the output of knowledge and the dissemination of information. All of those have greatly pushed the further collaboration.

Table 2. List of cooperation agreement signed within network of APQN

No.	Organizations/Agencies	Contract type
1	Asia-Pacific Quality Network(APQN) & Commonwealth of Learning(COL)	MoC
2	Asia-Pacific Quality Network(APQN) & Advances in Management, India(AIM)	
3	Asia-Pacific Quality Network(APQN)& The Higher Education Evaluation and Accreditation Council of Taiwan(HEEACT)	MoU
4	Asia-Pacific Quality Network(APQN) & European Consortium for Accreditation in higher education(ECA)	
5	Asia-Pacific Quality Network(APQN) & European Alliance for Subject and professional Accreditation and Quality Assurance(EASPA)	
6	Asia-Pacific Quality Network(APQN) & Russia AKKORK	
7	Asia-Pacific Quality Network(APQN) & Arab Network for Quality Assurance Agencies in Higher Education(ANQAHE)	
8	Australian Universities Quality Agency(AUQA) & National Assessment and Accreditation Council(NAAC)	
9	Hong Kong Council for Accreditation of Academic and Vocational Qualification(HKCAAVQ) & Shanghai Educational Evaluation Institute(SEEI)	
10	Office of National Education Standards and Quality Assessment(ONESQA) & Shanghai Educational Evaluation Institute(SEEI)	
11	Office of National Education Standards and Quality Assessment(ONESQA) & The Higher Education Evaluation and Accreditation Council of Taiwan(HEEACT)	
12	Australian Universities Quality Agency(AUQA) & Malaysian Qualification Agency(MQA)	
13	APQN Quality Information Portal Cooperated with Horizon Campus in Sri Lanka	MoC
14	Cooperation of "the 7th International Conference of Teaching and Learning Quality Assurance" between APQN and Macao Polytechnic Institute（2015）	
15	Cooperation of "the 1st Global Summit on Quality Assurance" between APQN and India: National Assessment and accreditation Council (NAAC)（2016）	
16	Cooperation of "the 8th International Conference of Teaching and Learning Quality Assurance" between APQN and Macao Polytechnic Institute（2015）（2016）	
17	Cooperation of "the 2nd Global Summit on Quality Assurance" between APQN and Education Evaluation and Accreditation Council of Taiwan(HEEACT)（2017）	
18	Cooperation of Online course on Internal Quality Assurance in Higher Education between UNESCO IIEP and APQN (2017)	
19	Cooperation of "the 9th International Conference of Teaching and Learning Quality Assurance" between APQN and Macao Polytechnic Institute（2015）（2017）	
20	INQAAHE-APQN Partnership Project Agreement of Quality Assurance: Internal and External Quality Assurance Landscape(2017-2018)	

2.2 Cooperation Practice
2.2.1 Cooperation Projects

In capacity building of cooperation, APQN is not satisfied with the expression of willingness or agreements. APQN has been encouraging some specific organizations and agencies to work jointly in a number of projects, including organizing conferences, co-sponsorship, and co-development of QA tools, etc. Table 3 shows over 30 cooperation projects that APQN has implemented.

Table 3 List of APQN Cooperation Projects

Time	Partner	Project	Cooperation Method
2004-2008	World Bank	Development Grant Facility (DGF)	Implementing
2005	INQAAHE	Annual Conference and AGM	Co-organizing
2006-2007	UNESCO	APQN-UNESCO Quality Toolkit	Translating
	UNESCO	First International Conference on Assessing Quality in Higher Education (ICAQHE): Prosperity through Quality Education	Co-sponsoring
2008-2012	UNESCO	Construction of APQN Website	Implementing
	UNESCO	Internship program	Implementing

2008	UNESCO	Chinese Translation: the Road towards Capacity Building	Implementing
	UNESCO	"Higher Education Quality Assurance Principles for the Asia Pacific Region" (Chiba Principles)	Developing
	INQAAHE	Consultant Database	Developing
2009	GDETA, Vietnam	APQN-GDETA Agreement to hold 2009 AAC & AGM	Co-hosting
2010-2011	ONESQA, Thailand	APQN-ONESQA Agreement to hold 2010 AAC & AGM	Co-hosting
	IIEP-UNESCO	Distance education course "External Quality Assurance: Option for Higher Education Management"	Co-organizing
	UNESCO	Training workshop for external reviewers	Implementing
	UNESCO	Workshop for Pacific Nation	Implementing
2011	NAAC, India	APQN-NAAC Agreement to hold 2011 AAC & AGM	Co-hosting
2012	UNESCO	Mutual Recognition Project	Implementing
	UNESCO	Publication of Electronic Package for Reviewers	Implementing
	ACC, Cambodia	APQN-ACC Agreement to hold 2012 AAC & AGM	Co-hosting
2013	TWAEA, Chinese Taipei	APQN-TWAEA Agreement to hold 2013 AAC & AGM	Co-hosting
2014	FTU, Vietnam	APQN-FTU Agreement to hold 2014 AAC & AGM	Co-hosting
2015	MPI	"the 7th International Conference of Teaching and Learning Quality Assurance"	Co-organizing
	YHEEC, China	APQN- YHEEC Agreement to hold 2015 AAC & AGM	
2016	NAAC	the 1st Global Summit on Quality Assurance	
	MPI	"the 8th International Conference of Teaching and Learning Quality Assurance"	
	HEC, Fiji	APQN- FHEC Agreement to hold 2016 AAC & AGM	
2017	HEEACT	"the 2nd Global Summit on Quality Assurance"	Co-organizing
	IIEP-UNESCO	Online course on Internal Quality Assurance in Higher Education	
	MPI	"the 9th International Conference of Teaching and Learning Quality Assurance"	Co-hosting
	NACPA, Russia	APQN-NACPA Agreement to hold 2017 AAC & AGM	Co-hosting
2017-2018	INQAAHE	Quality Assurance: Survey of Internal and External Quality Assurance Landscape	Implementing
	SSESASC, India	APQN- SSESASC Agreement to hold 2018 AAC & AGM	Co-hosting
	BAN-PT	"the 3rd Global Summit on Quality Assurance"	Implementing
2018-2019	UGC, Sri Lanka	APQN-UGC Agreement to hold 2019 AAC & AGM	Implementing

Table 3 shows three main approaches that APQN adapted in the project cooperation with other organizations: implementing, co-organizing and co-sponsoring. Implementing refers to the process that APQN has organized and implemented the activities on its own with funding from international organizations. The suggestion from international organizations on the topic, content, method and other issues related to the events would be warmly welcomed. Co-organizing activities include translating cooperation, developing cooperation. At this level of cooperation, all the parties will engage in events. Co-sponsoring refers to funds coming from APQN and its partner.

2.2.2 Staff Capacity Training

The report of Development Grant Facility (DGF) points out that workshops and conferences are the essential method to enhance regional QA capacity building. Based on statistics, APQN has organized 76 events from 2004 to 2017 (see Fig.1).
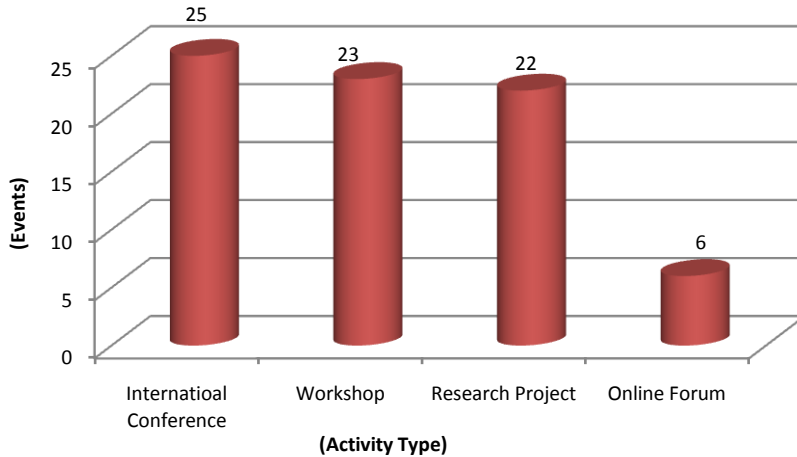
Figure 1. Types and Number of APQN QA Activities (APQN, 2005-2017)

23 workshops have been completed in total under the topic of quality assurance. Staff members from APQN membership organizations received training on external evaluation, internal evaluation and cross-border education QA to strengthen their capacity building. After the workshop, participants have delivered feedback to APQN to explain their results and expectations. Many have confirmed that the training courses were very helpful, which also increases their trust and faith in APQN. Due to this trust and faith member organizations are willing to continue working with APQN. Once in 2 years, online forums are co-conducted by APQN and multiple partners to discuss the current QA issue. This approach significantly reduces APQN operating costs and enhances the effectiveness, along with extension of the number of participants. By eliminating space difficulties of off-line cooperation and expanding the scope of online cooperation, online forum system has become an effective path for communication exchanges and dissemination.

2.2.3 Staff Capacity building

Staff movements (2005-2015) and staff capacity building (since 2016) methods also promote cooperation. Until 2017, 161 persons have participated in APQN staff movement according to the statistics (see Fig. 2).

Figure 2. Statistic of APQN Staff Movement (2007-2016) (APQN, 2007-2015)

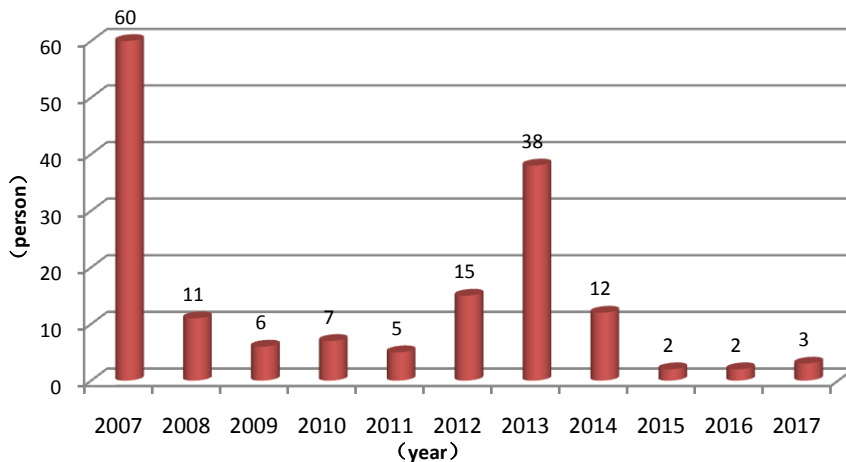In November 2007, APQN co-organized an internship workshop with Shanghai Education Evaluation Institute (SEEI) and Yunnan Higher Education Evaluation Center (YHEEC) at Yunnan University. 48 trainees from 18 QAAs of China, Philippines, New Zealand and other countries attended the workshop. In February 2013, APQN organized two-week staff exchange at L.H. Martin College of Melbourne University in Australia on "Quality Assurance Capacity Building" for 32 trainees from 10 countries including Cambodia, China, India, Indonesia, Laos, Malaysia, Myanmar, Philippines, Thailand, and Vietnam. The workshops were focused on 2 main goals: 1) to strengthen the capacity of national and provincial QAAs; 2) to train staff capacity from different QA organizations.

From March 12 to 17, 2017, Higher Education Evaluation and Accreditation Council of Taiwan (HEEACT) hosted three colleagues from Japan National Institution for Academic Degrees and Quality Enhancement of Higher Education (NIAD-QE) in APQN Staff Building Program. They benefited a lot by having participated in a variety of QA activities, including ice breaking meeting, joint QA seminar, interaction with HEEACT research fellows, visiting University QA office, observing student learning in class, meeting with Swedish scholars, as well as taking part in feedback forum. "Staff exchange program satisfaction survey" shows that most respondents (89.66%) agreed that the program enhanced HEEACT development.

The APQN staff movement involves two main participants: the sender (guest) and the receiver (host). The core purposes are to: 1) assist the professional development of the visiting staff members; 2) enhance the capacity building of both the guest and the host organizations; and 3) strengthen the communication and cooperation between the both parties. The Programme is expected to contribute to the capacity development of the emerging quality assurance systems.

2.2.4 Development of QA Capacity Tools

A series of QA capacity tools were developed during the cooperation. In 2012, APQN published a "*Toolkit of Assessing Quality in Higher Education: Information Package for Reviewers' Training*". The package is the outcome of compilation and editing of contributions made by several known and unknown experts drawn from various QA agencies and countries, with UNESCO's support through GIQAC funds. Seven training modules in this book provide a comprehensive guide to develop a generic resource for training of reviewers and experts, which can be contextualized to the diverse QA need of higher education for respective countries or territories. The book "*Cross-Border Higher Education-the Road towards Capacity Building*" was published under the project leader Dr. Li Yaogang from SEEI in cooperation with 12 staff members from 8 QAAs in 2008 under the support of World Bank and Organization for Economic Cooperation and Development (OECD). It states out how the cross-border higher education enhances staff capacity building in developing countries, and provides guidance on policy decisions related to QA negotiations. Through the cooperation, the team improved their understanding towards QA of cross-border education and collaboration among QA agencies. Besides, the survey questionnaire of "*the Revision of Higher Education Quality Assurance Principles for the Asia Pacific Region (Chiba Principles)*" was conducted as the result of cooperation as well by Dr. Stella Antony, Dr. Dorte Kristoffersen and Prof. Jianxin Zhang who collected inputs from APQN members. The feedback was received from 12 full members, 1 intermediate member and 3 institutional members. The survey result was used for the revision of *Chiba Principle* to improve capacity building.

2.2.5 Construction of QA Consultant Database

With the development and support of GIQAC from World Bank channeled through the UNESCO in 2008, APQN cooperated with INQAAHE and the Arab Network for Quality Assurance in Higher Education (ANQAHE) to develop Consultant Database. According to CIQAC, all the consultants in Database are identified by the international experts who are recommended by the three Networks. The Datebase shows detailed information about every consultant, such as office telephone number,language skill level, acadamic qulifications and so on.
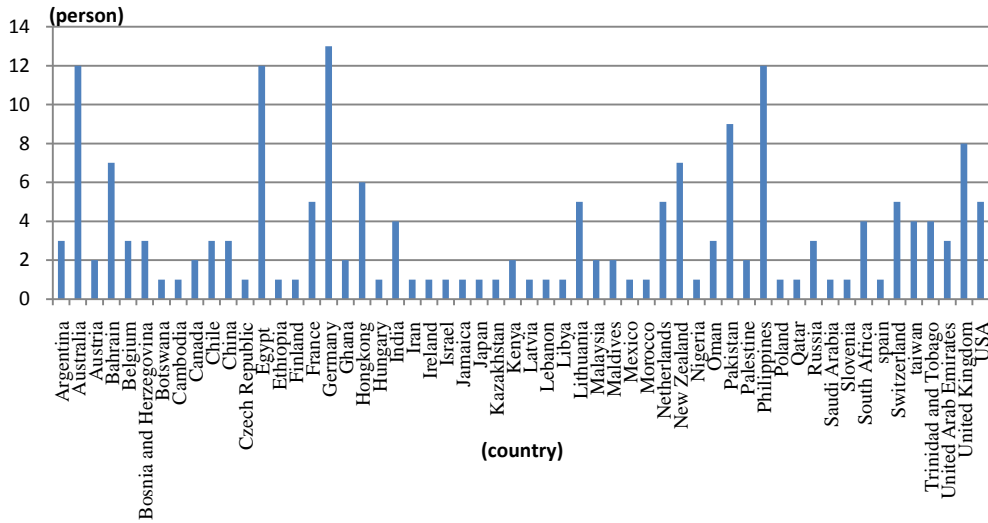
Figure 3. Country-Specific Composition of the Consultant Database

With the common effort from these three organizations, the number of consultants in the database has significantly increased in comparison with 45 in 2005. As of the 1st October 2016, the database includes 188 consultants from 56 countries of Asia-Pacific, America, Europe, Arab and other regions. They are willing to provide advice to the member agency in the world, especially in the Asia-Pacific Region. Different consultants have different social and educational backgrounds: 136 consultants have PhD degrees, accounting to 72% of total amount. 47% consultants are from developed countries and 53% - from developing countries (see Fig. 3). The number of counsultants in two kinds of the countries is roughly equal. Their professional expertise ensures their competences in different issues that represent interest for the agency.

3. Enlightment and Suggestion

As an international network, APQN has formed a comprehensive cooperation network at global, interregional and inner-regional levels, consisting of three dimensions of APQN, groups and individuals. The network is quite big from the perspective of quantity, while still needs to improve from the perspective of quality.

According to the limited data, there are 12 cooperation agreements between APQN and organizations at all levels. The signing of the agreements seems to make the cooperation among these organizations and agencies more formal, regulatory and effective. But out of practice, it is found that under the agreements between APQN and organizations/agencies, there are indeed some substantial cooperations coming into being, but actual projects or researches are limited at the inter-regional agencies level. The agreement of majority members just represent good willingness for further cooperation and opportunities, and still need to be driven into actual practice. So even under the assurance of agreements, there is still doubt about how much of the resources can be fully used in true cooperation in the network. There is a urgent need for APQN to transform the network into practical and valuable resources for qualitative breakthrough, but not just a symbol of good relation and willingness.

3.1 Difining the role of APQN accurately

The definition of APQN's role in social developemnt should stay fundamental no matter what kind of development strategies that APQN focuses on in the future. And the core value and organizational culture are the inner driver for sustainable development.

Being a non-governmental and non-profit organization, all the APQN can provide is the un-forced and un-official power to improve the regional QA in higher education. Its function defers from governments and enterprises as well, automatically is driven by its voluntary service. Upon the basis of democracy and negotiation in the social role of APQN, dedication and service should be the basis of organizational cuture.

Distinct and accurate difinition of APQN's role requires a focus on credibility and core value of service, fostering regional mutual trust, sticking to the faith for the beautiful future, sharing advanced ideas and practice within and outside the regional, makinging APQN realize its mission and vision with commitment, service capacity, and creativity.

3.2 Promoting the APQN QA projects

The essential task of QA project is the foundation of APQN, as well as precious opportunity for promoting cooperation. To improve QA of higher education in the Asia-Pacific region, all work that APQN conducts should be focused on the professional service and promotion of administration procedures.

In the stage of fast development, conducting a number of QA activities to increase APQN influence is a correct decision and lays crucial foundation for future stable development. At present, speeding up sustainable development process and emphasing QA activities should get back to core task to strengthen the dissolving boundaries for regional QA system, specially for the promotion of existing administration and practice.

With the current splendid resources for service, APQN should make a good use of consultant database with 188 registered professionals to meet QAAs' need in the region. Meawhile, more efforts should be put in the promotion of administration and practice like Quality Label, Asai-Pacific Quality Register(APQR), etc., by introducing and stressing more QA projects, distributing information brochures or others to access to the core task of APQN and transform the participation from "attendee" into "practitionor".

3.3 Facilitating the actual cooperation among institution members

Institution member is APQN's majority composition. Assisting their QA capacity building is the direct measure to improve HEIs' internal QA, which is indispensable for QA system in higher education. Facilitaing the actual cooperation plays a great part in accelerating mutual recognition and regional development. Just like the actions of extenal QAAs, for Institution member, many cooperations can be conducted by way of conferences, projects, joint-programs, etc., in which staff members can learn from each other's good experience and practice and reach the goal of capacity building.

Only the substantial cooperation can brings truly enhancement in capacity. More efforts should be put in assuring the essence of collaborations rather than remaining shallow friendly agreements. The difficulties of cooperation are bound from the perspective of diverse cultures, languages and nations in the Asia-Pacific region. What we can do is to ensure rational communication to protect the rights and interests of all parties, which is an important work to promote substantive cooperation.

3.4 Reference to the experiences of UNESCO-IICBA

Since UN and UNESCO launched initiative of Capacity Building last century, there have been a lot of theoretical and practical experiences from them, such as Capacity Building framework made by UNESCO - International Institute for Capacity Building in Africa (IICBA). The Capacity Building Matrix shows seven steps for us to now what capacity at each level—individual, organization and environment—needs to be developed and to understand what capacity exactly needs to be developed.

Table 4. Capacity Building Matrix(UNESCO-IICBA, 2006)

Overall Goal	(#1)				
Project Goal	(#2)				
		Whose capacity? (#4)	Capacity to do what? (#5)	Breakdown(Element) of the capacity (#6)	How to develop capacity (#7)	How to sustain capacity (#8)
	Individual (skill, knowledge, attitude, value, experience, etc. of staff)					
Target Organiz ations (#4)	Organization (infrastructure, budget, decision-making process, leadership, administrative structure, organization culture, etc.)					
	Environment (policy framework, legal system, etc.)					

The matrix should elaborate on the following main concepts: No. 1: overall goal; No.2: project goal; No.3: target organizations; No.4: whose capacity; No 5: capacity to do what; No.6: Element of the capacity; No.7: How to develop capacity; and No. 8: How to sustain capacity. By this way, we can develop our capacity gradually and steadily.

4. Conclusion

Early in 1998, United Nations stated the definition of capacity building as "*a process that focuses on enhancing the skills, knowledge & social capabilities available to individuals, social & political systems*". Since the accomplishment of GIQAC, APQN has made a number of achievments including making QA capacity tool, publishing translated book of *the Road towards Capacity Building,* disseminating all kinds of updated QA information in higher education, establishing Consultant Database, conducting 6 Online-Forums, implementing cross-regional staff exchange, etc. All these help APQN establish a global cooperation network with global, inter-regional and inner-regional organizations. This paper suggests that on the basis of identifying APQN's role, APQN should promote mutual trust and faith in QA community in this region, foster QA culture; provide collaboration opportunities by increasing the promotion of QA core task, strengthen the cooperation of capacity building by enhancing substantive cooperation among APQN members.

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CAPABILITY BUILDING
BEST PRACTICES, AND WHAT ELSE WENT WRONG

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Abstract

Any organization including quality assurance bodies should have the capacity to adapt to changes in order to be able to perform its activities. The capacity can be enhanced by capability-building programme which, as used in this paper, is the development of human resource competencies, specifically referring to the accreditors of the Accrediting Agency of Chartered Colleges and Universities in the Philippines (AACCUP). The AACCUP has a Register of over 4,000 accreditors who are involved in training and retraining aimed at improvement of their expertise in accreditation (evaluation) of the institutions and programs delivered by 112 state universities and colleges. In 2014, training of accreditors was mandatory due to the paradigm shift of quality assurance from the traditional input-process-focused approach to outcome-based quality assurance. This paper analyses the lessons learned from accreditors' training, the best practices implemented and the problems faced.

The results of accreditors' survey aimed at evaluating the capability-building program conducted at Mid-year Conference in 2017, showed that the total of 1,367 programs were evaluated by 1,420 accreditors in 2016. However, certain challenges marred what could have been an outstanding achievement. These weaknesses can be attributed to practices that went wrong in the training and will be addressed in the capability-building program in 2018.

Keywords: accreditors, capability-building, outcomes, competencies, best practices.

Introduction

This paper is a case study of one component of the capability-building program of a quality assurance agency, the Accrediting Agency of Chartered Colleges and Universities in the Philippines (AACCUP) which regularly holds a continuing series of training to build the competence of its Accreditors. It is about a specific case in the sense that the training was conducted in response to a dramatic change in the AACCUP's approach to quality assurance - a shift from the traditional input-process to outcomes-based quality assurance framework.

After the series of training sessions in 2014 – 2015, the Accreditors and their supervisors have noted certain deficiencies as well as strengths in the performance of the Accreditors who had undergone training. These observations have prompted the holding of an organized evaluation by the Accreditors who attended the training themselves. This evaluation came out with samples of best practices as well as the worst of them. This is the subject of this study which is published in detail in the following presentations. These will serve for a practical purpose – the lessons learned will be factored in redesigning and conducting the training activity in 2018.

Capability-building defined

Any organization should have the capacity to adapt to changes in order to be able to perform its activities. That capacity can be enhanced by capability-building through the sharpening of the competencies of its manpower resource, the infusion of more funds, and the adoption of technology.

Capability-building, as used in the this paper is confined to the improvement of the competencies of the human resources, more specifically, the Accreditors (Assessors) required in the performance of their duties in enhancing the quality of institutions and programs of the 112 state universities and colleges in the Philippines. Timewise, this covers the period from 2014-2017.

Historically, the training of Accreditors started as early as the 1990s, and pursued regularly for all AACCUP Assessors as a requisite of the trade. As of 2014, more than 4,000 Accreditors have undergone training and retraining. The training activities were anchored on the traditional input-process of accreditation.

The year 2014 witnessed the dramatic shift of the paradigm of quality assurance from the old input-process evaluation to the measurement of outcomes or competencies. This dramatic shift called for the revision of the focus of accreditation, and the realignment of the goals, protocols, processes, evaluation techniques and the retooling of the Acccreditors' competencies (knowledge, skills, attitudes). Thus, the need for the retraining of the Senior Accreditors and the training of new Accreditors.

Capability-building program of AACUP

As a standard practice, capability-building of Accreditors in AACCUP is a component of its Strategic Development Plan. The Agency follows a general approach in Capability-building with the following series of strategies.

1. Training needs as the benchmark of the training content. The training on the new Outcomes-based Quality Assurance (OBQA) framework naturally starts with an understanding of its fundamentals: outcomes as a new factor to be used and the concomitant realignment of the accreditation process. While it is difficult to make an expansive survey of training needs, the Agency made use of the evaluation reports made during the yearly Accreditors' National Conferences. The planning sessions for the implementation of the OBQA also suggested the focus of the training of Accreditors.

2. Preparation of the Training Design that included the objectives, course content, training content and schedules (usually 3 days) and evaluation of the participants' performance, and of the training venue itself. These are prepared by the regular AACCUP Training Staffs, situated in four (4) Training Centers in Luzon, Visayas, Mindanao and one (1) National Center located in Manila with a core-staff of 3-4 Members each Center.

3. Selection of trainees recruited based on qualification standards. The Accreditors are carefully selected using standards with the basic assumption that not everyone even with the best tertiary education can qualify as AACCUP Accreditor. Ninety-eight percent (98%) of the Accreditors are members of the teaching staff of the state universities and colleges. The AACCUP sets the qualification requirements for the training of prospective Accreditors. Only those who pass the series of training activities do become Accreditors. Even these very stringent qualification requirements do not give the guarantee that all will turn out to be effective Accreditors. A couple of the qualification standards (such as the educational attainment – at least a Master's Degree holder, or faculty rank – at least Assistant Professor, computer literacy, and even health requirements are easy to impose. However, some qualitative standards such as the possession of objective or professional standard, ability to work in teams, behavior and promptness are not easily established. Another requirement is the recommendations to be made by the Head of the educational institution who do not necessarily follow the

qualification standards set by AACCUP. Parenthetically, the recommendation of the Head of the State University of State College is necessary because the institution bears the cost training. More importantly, they are the ones who authorize the travel of their Accreditors when invited by AACCUP to on-site accreditation visits.

4. The actual training of Accreditors usually takes place in the training centers for a period of three (3) days for
    - New Accreditors, i.e., they have never attended previous trainings, and, therefore, are not yet accredited (by AACCUP) Accreditors;
    - Senior Accreditors, i.e., trained and experienced Accreditors;
    - Senior Accreditors for higher level Accreditation, i. e., select corps of Accreditors already trained in OBQA, and will be assigned to accredit advanced level of Accreditation for Level III and Level IV (Accreditation status is awarded in an ascending level of quality, such as Level I, II, III, and IV, the last level (Level IV) being the highest.

From 2014 to 2017, 3,276 Accreditors attended training on OBQA composed of a total of 2,300 New Accreditors, and 1,436 Senior Accreditors. Out of this number, 362 attended further training for higher level programs (Level III and Level IV). Not all are, however, active in Accreditation. In 2016, only 1,220 were actually included in accreditation on-site visits; and only 1,420 in 2017. Only about 1/3 of the trained Accreditors are actually active. The non-participation of trained Accreditors is one of the challenges that hinder AACCUP's capacity to respond to SUCs' applications for accreditation visits. In 2017, while 1,367 programs were subjected to on-site visits and awarded accreditation status, some 50 applications were placed in the waiting list due to the lack of Accreditors. This problem merits a separate report.

Evaluation of the impact of Training is actually confined to the outcome of the training activity as shown in the objectives on the part of the learners, which is very inadequate, and post-evaluation which is actually on the training activity itself, like, effectiveness of speakers or trainors, adequacy and relevance of materials, the venue, the group or workshop groups.

Evaluation of the individual Accreditors in the on-site accreditation performance are also made, but so far are not properly and adequately done. This is one aspect of the training which must be seriously attended to as it will redound to the real strengths and weaknesses of the Accreditors which can be addressed by further training.

What else went wrong? A modicum of success in the AACCUP capability-building program can rightly be claimed as demonstrated by the output of the Accreditors; 1,367 programs accredited by 1,420 Accreditors alone. But, certain challenges mar what could potentially be an outstanding performance. These challenges can be attributed to certain weaknesses in the conduct of the training program.

Lessons learned

In the 3-day Accreditors' Annual Mid-Year Conference held in Manila on July 24-26, 2017, the workshop participants came out with the following "areas of concern" regarding the training program:
    - Too many participants in training activities. A maximum of 60 to 65 participants to a 3-day training, but walk-in participants check-in. Measures are adopted to solve this problem. The unexpected number consequently results in over-crowding, less-manageable workshop programs, inadequacy of training materials, and ineffective results.
    - Lack of training staff to attend to the needs and concerns of participants in cases where the maximum number of program participants is exceeded. The Trainers are selected from among the best college professors, but this does not guarantee

effective learning when they use irrelevant training techniques as in teaching a "how-to" subject with a full lecture.

- Participants generally complain about very limited time devoted to training sessions, like, workshops, simulations, role playing, etc. Close monitoring by the training staff would alleviate this problem. Probably, a training activity should be limited to a manageable number of objectives that can be successfully achieved should be set.

- Some training materials, especially those that were expeditiously prepared by overloaded members of the training staff are not very useful to the trainees. This is further aggravated when an unexpected number of participants exceeds the number of materials that are prepared.

- Some trainers use very limited, irrelevant and ineffective methods. This suggests that the training staff should also be subjected to a capability-building program, and not just orientation or briefing done and led by Senior Training staff.

- We still have to devise a part of the capability-building program that address behavioral problems, like negative attitude, etc.

Application of Lessons learned

The AACCUP Capability-Building Program is probably one of the most extensive among Quality Assurance Agencies. It is probably the main factor considered by the APQN in awarding the 2016 APQN Quality Award in the category of Strengthening Quality Assurance as a Profession. The Program is indeed rich in experience in the good and the bad practices in building the capability of QA Agencies with particular reference to their Accreditors. This year 2018 would like to explore the lessons learned from its capability-building program by conducting a formal study that will result in the revision of the OBQA Framework.

This paper presented just a snapshot of the lessons learned from the AACCUP Capability-Building Program. It will be a useful teaser to the full-blown study to be made early this year. Of course, it will be more because we have not included in this presentation the AACCUP Capability-Building Program of the Internal Quality Assurance Units of the State Universities and Colleges, and its Internal Quality Assurance Program that address its own office staff.

CHALLENGES FOR QUALITY ASSURANCE
IN THE EUROPEAN HIGHER EDUCATION AREA

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Abstract
Rapid changes in higher education require critical analysis of quality assurance tools and changes in their development and implementation. Quality assurance must respond to the changing higher education landscape in order not to be become an obstacle for innovation and modernisation. This paper draws attention to recent changes in the European Quality Assurance Area as well as presents challenges that are linked to adapting to the fast-changing environment, also to demonstrating the impact of the agencies' work, thus, justifying the benefits of external quality assurance.
Keywords*: Quality assurance, higher education, Bologna process.*

Introduction

Higher education play a key role in countries' response to globalization, but at the same time becoming itself more and more globalised. 20 years ago European countries agreed on a common vision of a European Higher Education Area that would allow European students and graduates to be able to move easily from one country to another with full recognition of qualifications and periods of study, and access freely the European labour market. It was expected that Higher Education in the European region would increase its international competitiveness, as well as improve cooperation with HE in other regions of the world.

Changes in Higher Education

In the last quarter of the 20th century serious concerns with quality assurance in higher education emerged, on the part of both the institutions themselves and society in general. Higher education has experienced noticeable changes, some particularly relevant aspects were:

- The massification of access, which resulted in the exponential growth in higher education over the world, the diversification of provision of study programmes, the diversification of institutions as a consequence of the fast development of private sectors, as well as the new expectations of the public with regard to higher education in enhancing the capacity of students and staff to be active and responsible citizens in the context of the knowledge society.

- Internationalization, which brought a need of fair recognition of qualifications, in order to facilitate the transferability of academic and professional qualifications, in face of an increased mobility of students and graduates. This question is particularly relevant for the European Union, as a fundamental condition for ensuring the right to free mobility and support of common job market.

- Greater awareness of demand for quality. Higher education institutions were faced with new challenges and expectations, namely the problem of how to preserve quality in the

face of massive and sometimes uncontrolled growth, which made it necessary to consider quality from a more institutional perspective.

The Bologna process

The Bologna Process and the Lisbon Strategy are the main vehicles or frameworks guiding the European response to globalisation in higher education.

Historically, quality assurance in most cases has been a responsibility of the ministry in charge of education. The massification of higher education in the 1980s and 1990s, together with the increasing internationalization led to the need to ensure quality of higher education in the changing environment in internationally acceptable and trustworthy ways. With increased student mobility, Higher Education Institutions needed to find ways to demonstrate, also outside of their national context, that they provided high quality education, and that this was certified in a reliable way. (ENQA, 2010). There was a kind of wave of new quality assurance bodies established in the 1990s, with organizations being founded at almost the same time in the North-Western (Denmark, France, the Netherlands, and the UK established independent QA agencies) and Central-Eastern (Austria, Hungary, Latvia, Lithuania, Poland, etc.) parts of Europe.

About the same time the Bologna Process (formal beginning in 1999 with signing Bologna Declaration) has brought about a number of important reforms in European higher education. This was an important bottom-up initiative towards system convergence with a view to enhancing the international competitiveness of European higher education. The Bologna Process represents the totality of commitments freely taken by each signatory country (48 countries full members as of 2018) to reform its own higher education system in order to create overall convergence at European level, as a way to enhance international/global competitiveness. Its non-binding character was a crucial facilitator, given the need to overcome reluctance in Europe towards standardisation and harmonisation (Wende, 2009). Bologna process started as an intergovernmental initiative of four ministers, but over the past decade the agenda of the Bologna Process has evolved considerably through its biannual conferences. At each Bologna conference, new action lines were added, new aspects highlighted, or the phrasing of existing fields of action adjusted. Reforms have included the convergence of degree structures, the establishment of a common credit transfer and accumulation system, and the use of a Diploma Supplement for the purpose of transparency, mobility and facilitated recognition of degrees and periods of study.

Quality assurance in the European context

Quality assurance in the European context has evolved in parallel with the Bologna Process. In this area huge advances have been made in terms of both policy and implementation since 1999. A major milestone in this development was the statement in the 2003 Berlin Ministerial communiqué that "the primary responsibility for quality assurance lies within each higher education institution itself, and this provides the basis for real accountability of the academic system" (Berlin Communiqué, 2003). Another important milestone has been the adoption of a common framework for quality assurance across Europe, namely the Standards and Guidelines for Quality Assurance in the European Higher Education Area (the ESG) in 2005.

Even having shared Standards and Guidelines for Quality Assurance European countries have different approaches to quality assurance. The meaning of quality assurance may vary depending on the field of activity. Different countries have evolved QA models for their higher education systems as necessitated by their unique national contexts. But nevertheless there lies a common unifying thread that unites together the basic concepts (ESG 2015):

- Higher education institutions have primary responsibility for the quality of their provision and its assurance;

- Quality assurance responds to the diversity of higher education systems, institutions, programmes and students;
- Quality assurance supports the development of a quality culture;
- Quality assurance takes into account the needs and expectations of students, all other stakeholders and society.

Changes in European Quality Assurance

Rapid changes in higher education require critical analysis of quality assurance tools and changes in their development and implementation. Quality assurance must respond to the changing higher education landscape in order not to be become an obstacle for innovation and modernisation. The economic downturn following 2008 also caused some countries to look at merging agencies with different functions relating to qualifications and quality assurance. That was a case in Ireland where QQI is now overlooking quality assurance of universities and institutes of technology as well as acts as ENIC/NARIC centre; AQ Austria is now responsible for evaluation of public universities, *fachoschule* and private universities; Latvian AIC acts as ENIC/NARIC office and Quality assurance agency. One could also observe widening of responsibilities of the agencies in Europe:

- FINEEC (Finland) supervises education form early childhood to higher education;
- QQI (Ireland) evaluates quality of higher education, further education (VET) and is responsible for National qualification framework and qualification's recognition;
- NOKUT (Norway) assesses higher education, Vocational education and training and acts as ENIC/NARIC;
- EKKA (Estonia) along with higher education institutions reviews providers of Vocational education and training.

There have been advantages and disadvantages of such mergers, but it has permitted some of the smaller member states to create agencies with multiple functions that have a critical mass of staff in relation to educational functions. In some cases, new functions have provided synergies and allowed for multi-actor involvement of stakeholders At the same time, such changes do bring potential challenges especially to agencies that have been allocated a number of functions by ministries, such that could possibly compromise their independence as external quality assurance agencies operating in line with ESG. Therefore, each time an agency undergoes such changes, the issue of independence should be re-negotiated.

The issue of independence of Quality assurance agencies is high on the agenda since establishment of ENQA (European Association for Quality Assurance in Higher Education) and adoption of ESG. The Standard requires that "Agencies should be independent and act autonomously. They should have full responsibility for their operations and the outcomes of those operations without third party influence". The guideline further clarifies the most important points for considering the independence of an agency:

- Organisational independence, demonstrated by official documentation that stipulates the independence of the agency's work from third parties, such as higher education institutions, governments and other stakeholder organisations;
- Operational independence: the definition and operation of the agency's procedures and methods as well as the nomination and appointment of external experts are undertaken independently from third parties such as higher education institutions, governments and other stakeholders;
- Independence of formal outcomes: while experts from relevant stakeholder backgrounds, particularly students, take part in quality assurance processes, the final outcomes of the quality assurance processes remain the responsibility of the agency.

It is still a question whether Quality assurance agencies are fully independent from the governments or other state institutions? In most countries QA Agencies are established by the Governments or the Parliament or Ministries responsible for education. The overall framework of quality assurance are designed and approved by the authorities. How (is) the opinion of the Agencies are taken into consideration in these cases – it is up to the politicians. Indications are that governments are seeking to have a far stronger influence than they had in the past. Former President of ENQA Achim Hopbach during the Member's Forum in Oslo expressed a view that Ministries right now are lacking tools for steering the higher education systems and they intend to use quality assurance for that purpose; and less and less it is about quality, but more and more about steering the higher education system. No longer is it easy for QA Agencies to implement the double mission of quality assurance – accountability and enhancement, because the trust in higher education institutions is diminishing and the demand of meeting minimum quality standards is growing (requirements – such as graduation rates or the number of students who find jobs in their fields immediately after graduation).

There have also been some developments whereby member states have left the responsibility of the organisation of external QA processes to agencies and the formal decisions are taken by separate bodies, such as accreditation councils (a case of Denmark accreditation decisions are taken by Danish Accreditation Council, in Switzerland – by Swiss accreditation council, in Netherlands-Flanders – final word by NVAO).

During the last several years it is possible to identify movement from programme accreditation (only) to a mixture of institutional accreditation and some programme audits/accreditations. Institutional assessments may carry lower costs and less 'administrative burden' than programme assessments, but audits or quality assurance system accreditations might give HEIs more institutional autonomy, they require effective internal quality assurance systems and a 'quality culture' within HEIs.

Another tendency - movement to more risk-based quality assurance. A "one size fits all" approach is not seen as appropriate for a diverse sector of higher education. The method involves more consecutive monitoring of performance of higher education institutions and direct attention to where it is most needed, focussing effort where it will have the most benefit in the development, enhancement and protection of quality.

Challenges for Quality Assurance in implementing ESG 2015

The majority of European quality assurance agencies are full members of ENQA and registered on EQAR. In February 2018, 50 quality assurance agencies from 28 EU countries were full ENQA members, while 46 agencies from 24 EU countries were listed in EQAR. As the main criteria for full membership is successful review by ENQA expert panel, it could be said that these agencies comply with the ESG. It also means that many national legal frameworks take into consideration the ESG.

The ESG 2015 take account of the developments in European higher education since 2005, such as the shift to student-centred learning and the need for flexible learning paths and the recognition of competencies gained outside formal education. In addition, the increased internationalisation of higher education, the spread of digital learning, and new forms of delivery are listed as important developments influencing the quality assurance of higher education. The ESG 2015 also make reference to other tools at the European level that contribute to transparency and trust in higher education, such as the qualifications frameworks, the ECTS, and the diploma supplement (EQUIP, 2016).

Quality assurance agencies across Europe are facing many challenges that are linked to adapting to the fast-changing higher education landscape, but also to demonstrating impact of the agencies' work, justifying thus the benefits of external quality assurance (EP, 2015).

The most remarkable development in quality assurance in the EHEA has been to give student voice on quality of their higher education institution and to actively involve them in quality assurance. In the draft of the Bologna Process Implementation Report in 2018, information has been gathered from national student unions on the level and frequency of involvement of students in external quality assurance activities (BFG, 2018).
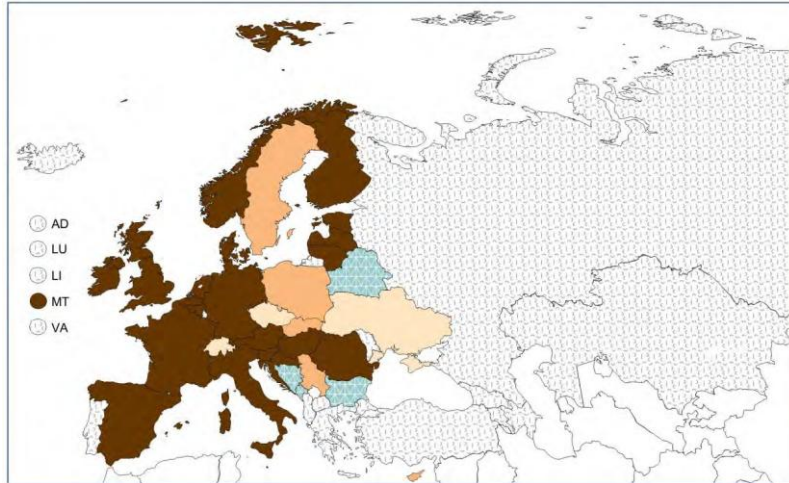
Source: draft version of Bologna follow up report, 2018

Figure 1. ESU perception of student participation in external quality assurance, 2016/17

The ESG, the key regulatory instrument in the European Higher Education Area, explicitly mention that students as internal stakeholders are jointly responsible for internal QA (standard 1.1), that they and other stakeholders should be involved in designing and continuous improvement of QA methodologies (ESG, 2015, Part 2), and that quality assurance agencies and accreditation bodies need to ensure involvement of stakeholders in their governance and work (ESG, 2015, Part 3).

But even with the clear highlight in ESG about student involvement in quality assurance only 14 countries out of 48 fully guarantee that students participate as full members in all quality assurance reviews at five levels:

- in governance structures of national quality assurance agencies
- in external review teams
- in the preparation of self-evaluation reports
- in the decision making process for external reviews
- in follow-up procedures

There is still considerable improvement to be done to meet the Bologna Process commitment to full student engagement.

More recently, the Bologna Process has brought about a shift from a focus on teaching and input measures to a focus on students and their learning outcomes. This is reflected also in the revised version of the ESG adopted in 2015. Consequently, many institutions have started to explore and use new pedagogical methods that are more student-centered, and to implement competence-based approaches to teaching and learning. The new approach has given the external quality assurance agencies a challenge for assessing how higher education institutions

have adjusted the requirements of the ESG 1.3. "Student-centered learning, teaching and assessment".

The Danish quality assurance agency has carried out thematic analysis (Warming, Frydensberg, 2017) and discovered that higher education institutions have a very different understanding of the Student-centered learning, such as:

- Variation in educational and didactic learning styles;
- The teacher's role in facilitation and planning the learning process;
- Flexibility with respect to the student's study path;
- The student's motivation with respect to learning and actively participating in the learning situation;
- Providing feedback on the student's ongoing academic development and performance in exam situations;
- Accommodating diversity across the student community;
- Backing from heads of institutions for the learning style;
- The student's readiness to engage in independent reflection and action;
- An offer of support services for students where private/personal factors present an obstacle to learning;
- Recruitment of teachers with the appropriate educational and didactic skills and a passion for the institution's teaching style;
- The right physical environment for learning which supports e.g. group work and encourages students to interact with teachers.

The figure below illustrates the many meanings which are associated with the Student-centered learning.
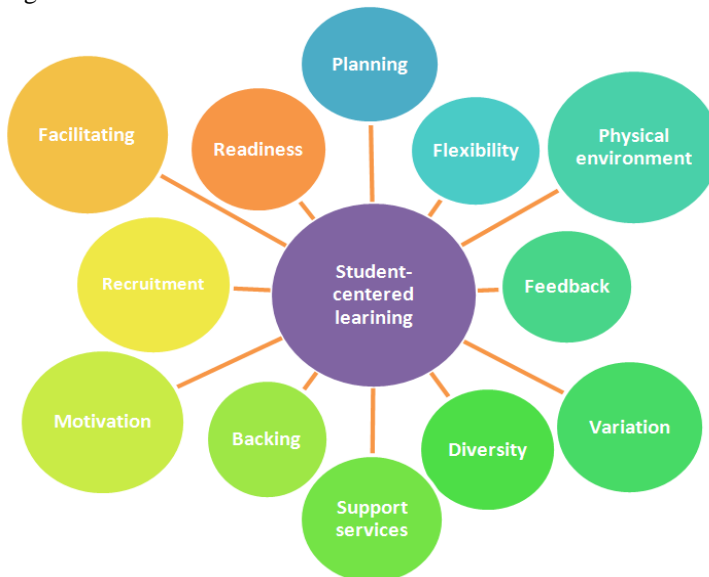
In order for Quality assurance agencies to evaluate whether the higher education institutions ensure that the programmes are delivered in a way that encourages students to take an active role in creating the learning process, and that the assessment of students reflects this approach, common understanding of this approach should be discussed and agreed by all stakeholders. This is a challenge that quality assurance agencies should address in the coming years.

Key developments in European quality assurance in recent years include a stronger focus on internal quality assurance, more stakeholder engagement and further internationalisation of quality assurance. Three dimensions of internationalization of quality assurance could be highlighted:

- Cross-border quality assurance;
- Quality assurance of cross-border higher education /transnational education;
- Quality assurance of joint programmes.

Cross-border QA benefits the openness of the European higher education system but depends on national legislation that defines under which conditions agencies can provide formally recognised quality assurance services beyond their own territory. Cross-border QA often takes place in parallel to the obligatory, national external quality assurance arrangements due to a lack of a legal framework allowing the recognition of such procedures. But only 13 EHEA systems recognise cross-border evaluation/accreditation by an EQAR-registered agency as part of the obligatory, national external quality assurance system.

Quality assurance agencies are also interested in internationalisation of their activities by involving international experts in quality reviews or as members of the Agencies' Boards. This kind of internationalization provides not only more objectivity to the evaluation process, but also sharing of best experiences. In some countries the main obstacle for such internationalization became the language of the process – higher education institutions are not willing to produce self-evaluation documents in English or other working language. And this is rather surprising knowing the aspiration of the most of European countries to increase mobility of students and lecturers as well as provision of studies in foreign languages.

The European Approach for Quality Assurance of Joint Programmes is still finding its way to the national systems of higher education. The European Approach was adopted by Ministers throughout the continent at the Yerevan Conference in 2015 and is designed to recognise the particular value of cooperation across national borders in joint programmes, and also to rationalise the process of quality assurance for these programmes. In 10 EHEA countries, the European Approach for Quality Assurance of Joint Programmes is available to all higher education institutions. In 23 further countries, it is not permitted by their legislative framework, although the quality assurance is based on programme-level accreditation.

Source: draft version of Bologna follow up report, 2018

Figure 2. Countries allowing the European Approach to Quality Assurance, 2016/17

In order for this single European process to be possible, governments have to accepted the approach and change their own national requirements.

Conclusions

Agencies need to develop more sustainable systems focusing both on minimum thresholds and continuous quality enhancement. This is especially important in the context of changing landscape of higher education and national policies. Quality assurance needs to engage all stakeholders and empower the students and staff as essential actors.

Reviewed ESG asks for new relations and balances between Internal quality assurance and External quality assurance where more and more higher education institutions take their own responsibility.

National policies should take into account the international dimension and open borders to necessary transparency and international recognition built on trust.

Quality assurance should be open for new challenges that will be brought by the fourth industrial revolution that is characterized by a range of new technologies that are fusing the physical, digital and biological worlds, impacting all disciplines, economies and industries, and even challenging ideas about what it means to be human.

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CAPACITY BUILDING OF PEER REVIEWERS

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Abstract

The vision of the Hong Kong Council for Accreditation of Academic and Vocational Qualifications (HKCAAVQ) is to become a nationally and globally recognised independent quality assurance body in education and training, dedicated to high quality accreditation, assessment and consultancy services. And as a member of Asia-Pacific Quality Network, HKCAAVQ maintains a firm commitment to openness and sharing of experience with its partner agencies. This paper outlines the experience of HKCAAVQ in providing training and support to peer reviewers (or Specialists). It also outlines the proposed directions of change that will address the feedback and meet the needs of the Specialists in the ever-changing educational landscape. This paper is also a response to the need of strengthening of capacity building among the quality assurance bodies and networks from around the world.

Keywords: Peer Reviewers, Capacity Building, Training of Peer Reviewers, Support of Peer Reviewers.

Introduction

The Hong Kong Council for Accreditation of Academic and Vocational Qualifications (HKCAAVQ) is a statutory body established under the HKCAAVQ Ordinance (Cap. 1150) that accredits academic as well as vocational and professional learning programmes to ensure that they meet threshold standards for entry into the Qualifications Register of the Hong Kong Qualifications Framework (HKQF).

Peer review is one of the guiding principles of HKCAAVQ and is at the heart of HKCAAVQ's quality assurance process. For this purpose, HKCAAVQ identifies prospective peer reviewers (or Specialists) from its established networks including representatives of higher education institutions, professional bodies, employers, and sister agencies.

HKCAAVQ has in place a transparent and rigorous process for appointment and management of Specialists. Firstly, a Specialists Selection Committee has been set up to advise the Executive Director on the policy and procedures for (re-)appointment, termination and suspension of Specialists. Secondly, the Committee considers and endorses the appointment of Specialists according to a set of criteria in the public domain. The appointment period of Specialists is normally three years. Thirdly, when considering and endorsing the re-appointment of Specialists for a second term of three years, the Committee takes into account the Specialists' experience and performance in accreditation exercise(s) and/or needs of HKCAAVQ. The Executive Director approves the (re-)appointment on the basis of the Committee's recommendations.

Currently, HKCAAVQ has a pool of 821 Specialists covering all 14 Areas of Study and Training of the Qualifications Register (Figure 1). About one-third of them reside outside Hong Kong. These non-local Specialists are generally engaged in institutional and/or academic programme (re-)accreditation exercises.
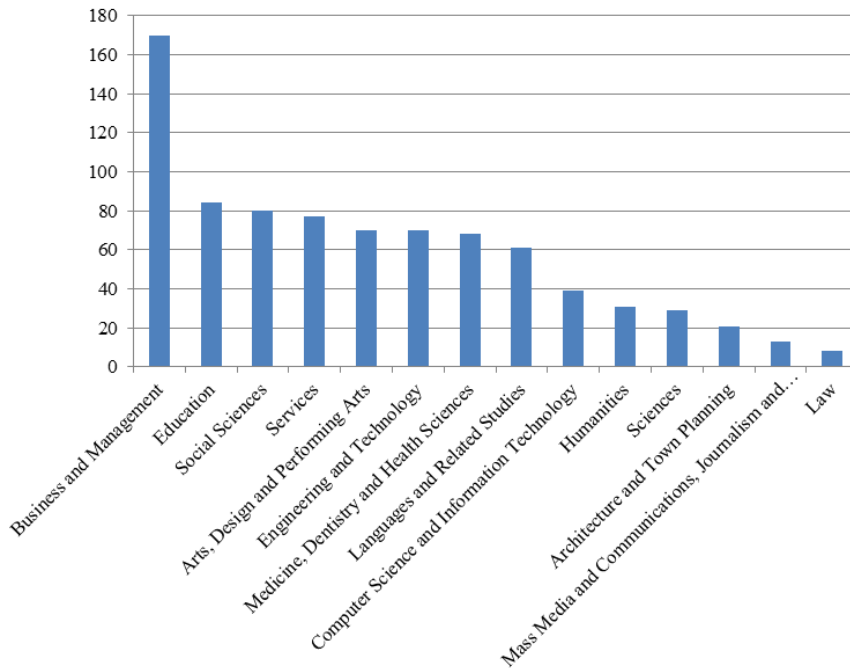
Figure 1: Specialists' Expertise

In early 2015, a new knowledge management system of HKCAAVQ, the Quality Management System (QMS) went live. The QMS gives staff of HKCAAVQ easy access to information and facilitates the internal sharing of information (Chan & Yau, 2016). Based on the QMS data between 1 January 2015 and 31 December 2017, HKCAAVQ conducted 580 academic and vocational accreditation exercises. 128 of them were institutional and/or academic programme (re-)accreditation exercises involving 159 local and non-local Specialists.

KCAAVQ adopts a systematic approach to equip Specialists with the necessary knowledge and skills for conducting accreditation exercises. Workshops on the basis of the level of experience of the Specialists are held on a regular basis. During these different workshops, role-playing activities are often used as a means for simulating the site visit of an accreditation exercise. At the same time, Specialists will receive Newsletters so that they may keep track of the latest development of HKCAAVQ. They may also access the Online Specialists Resource Centre (OSRC) for the training manual.

What and how have we been doing?

As a normal practice, HKCAAVQ conducts a voluntary opinion survey at the end of the workshops. The survey questionnaire consists of open-ended and closed-ended questions to gauge the opinion of the attending Specialists about the content and the arrangements of the workshops. Specialists are asked to rate the extent to which they agree that the overall quality of the workshop was high on a five-point scale. A mean score is calculated by using 5 for "Strongly Agree" to 1 for "Strongly Disagree".

Based on the QMS data between 1 January 2015 and 31 December 2017, HKCAAVQ conducted 17 workshops. A summary of these workshops is provided in Table 1.

***Table 1. Summary of Workshops for Specialists
between 1 January 2015 and 31 December 2017***

Type of Workshop	Number of Workshops	Number of Participants	Response Rate	Mean Score	Standard Deviation
Induction Workshop	3	35	87.1%	4.63	0.50
Refresher Workshop	6	139	82.8%	4.40	0.55
Thematic Workshops	6	178	77.0%	4.50	0.50
Role and Function of Panel Chair	2	20	63.5%	4.65	0.55
	17	**372**			

As shown in Table 1, it can easily be seen that there is a consistent agreement on the quality of the workshops for Specialists. When looking into the qualitative feedback, the majority of them felt that refresher and thematic workshops provided the environment for sharing of experience and clarifying issues that would not have been able to ask during the accreditation exercises. Nonetheless, Specialists have asked for the possibility of having workshops delivered in other forms of delivery. For instance, latest developments of HKCAAVQ and the HKQF on accreditation could be delivered in videos, leaving the face-to-face time for simulation and experience sharing.

An internal driver for change is the current review of accreditation standards. During the research phase of the review, organisations seeking accreditation and Specialists had said that they would expect to have the same level of guidance and information in applying the accreditation standards. To do that, a new structure for presenting accreditation standards will be implemented in April 2019. This has led to the need of additional workshops for familiarising organisations seeking accreditation and Specialists with the new structure.

At a macro level, student engagement, use of data in quality assurance, and differentiation of quality assurance approaches are contemporary issues pertinent to the development of the education sector. As these issues and views of the stakeholders will have an impact on the policy development of HKCAAVQ, it is important to engage stakeholders into dialogues and discussions as early as possible.

Proposed Directions of Change

As a quality assurance agency, HKCAAVQ seeks to take its capacity building initiatives for Specialists to a next level. HKCAAVQ is working on the following initiatives and directions of change.

First, HKCAAVQ is now using the Kirkpatrick model for evaluating the effectiveness of the workshops for Specialists. This evaluation is targeting at a specific group of Specialists who participated in at least one workshop and served on at least one accreditation panel in 2017. The first round of results will be available in May 2018.

Second, the OSRC is a static environment. In keeping with the latest trend of using a digital platform to structure online teaching, learning and assessment activities, HKCAAVQ is exploring a suitable digital platform that enables local and non-local Specialists to have 24/7 access to contents in various forms, such as video, text, links, interactivities and etc. The data analytics will enhance the traceability of the Specialists in acquiring the necessary knowledge and skills for conducting accreditation exercises.

Third, YouTube is a free-of-charge video-sharing website. YouTube analytics, such as Average Durations, Average Percentage Viewed, and Audience Retention are potential indicators of the effectiveness of the videos. Hou, Tam & Au-yeung (2017) published two series of informative videos about earth system science on YouTube and compared the analytics. The study revealed that short educational videos could encourage a higher viewing percentage and for longer videos an attractive beginning may help audience retention. HKCAAVQ may use YouTube as a platform for hosting bite-sized informative videos for mass communication with all Specialists (and to organisations seeking accreditation).

Fourth, Specialists are peers of the organisations seeking accreditation. Other than meeting each other during accreditation exercises, they should be provided with an opportunity to interact in an informal occasion. In May 2017, HKCAAVQ trialed for the first time and organised a joint event where organisations seeking accreditation and Specialists were invited to attend. The lesson learnt was the three-way flow of views and ideas allowed an alignment of understanding on the latest developments of HKCAAVQ among organisations seeking accreditation, Specialists and staff of HKCAAVQ and sharing of good practices in quality assurance. In 2018, HKCAAVQ will organise such a joint event again with more emphasis on dialogues and discussions. Joint sessions may also be organised for introducing the new structure of accreditation standards and exploring those contemporary issues pertinent to the education landscape.

Last but not least, as John Dewey said, "we do not learn from experience…we learn from reflecting on experience." Noting also Specialists have said that they appreciate a face-to-face environment where they are encouraged to share their accreditation experiences and ask questions outside an accreditation exercise, it is therefore critically important that there is an informal environment for learning and reflection among the Specialists to take place. As a psychology professor at The Chinese University of Hong Kong, So (2017) experimented an innovative pedagogical approach whereby her students were engaged in self-practice activities. At the same time, students were asked to reflect on their own experiences. This 'self-practice/self-reflection' approach, based on psychological research, put students in the center stage of their learning. The same principle of learning and reflection may well be extended to Specialists during face-to-face time. As adult learners, they relate their learning to what they already know or to their past accreditation experiences.

Way Forward

This paper outlined the experience of HKCAAVQ in providing training and support to Specialists. It also outlined the proposed directions of change that will address the feedback and meet the needs of the Specialists in the ever-changing education landscape. As a quality assurance agency, HKCAAVQ seeks to take its capacity building initiatives for Specialists to a next level.

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CAPACITY BUILDING:
THE CHANGING LANDSCAPE OF HIGHER EDUCATION - A NEED TO CHANGE?

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Abstract

Over the last decade, the higher education sector has undergone rapid expansion, but this alone was the beginning of the changing landscape. Currently, the sector is going through an upheaval in the way programmes are delivered. The qualifications of the past are considered by many as no longer having an effective correlation in the world where graduates are to be ready for jobs that have yet to be created and skills that have yet to be defined. With this changing paradigm the higher education sector is evolving with new courses, and new ways of delivery to ensure employment ready graduates.

Quality assurance is without doubt the guardian of higher education systems during this evolutionary period, but with the unparalleled challenges within the higher education landscape, professionals involved in QA may have to revaluate the way systems and procedures are being applied to the sector. The question that is pivotal to these changes is that, is there a need to change the way we think of quality and way it is measured or monitored and is there sufficient know-how to handle the current and changing landscape?

This keynote addresses endeavours to look at the evolution of the higher education system to equip graduates of the 21st century and beyond but at the same time take a holistic view of capacity needed at the institutional and national levels.

Keywords: *quality assurance, paradigm shift, skills and competences of graduates*

Overview

At the dawn of the 21st century, there is widespread recognition of the importance of skills and human capital for the economic development and prosperity of nations. Indeed, we have realized that the economic success of any nation is directly determined by the quality of their education system - most effective factor of production is human capital expressed in knowledge, skills, creative abilities and moral qualities of individuals in society.

Higher education institutions are increasingly viewed as "economic engines" by policy makers and as essential for ensuring knowledge production through research and innovation and the continuous education of the workforce. Research findings indicate that expanding tertiary education may promote faster technological catch up and improve a country's ability to maximize its economic output (Bloom, Canning, and Chan 2006).

Without doubt, the higher education sector has undergone significant transformation over the last decade. From traditional universities, a new higher education landscape is taking shape that is characterised by massive expansion and wider participation; the emergence of new players; a more diverse profile of HE institutions, programmes and students; varying modes of instructional delivery and an integrated use of communication and educational technologies.

In recognition of these underlying trends, countries are becoming conscious of the need for effective quality assurance and quality improvement of tertiary institutions so as to reassure the public about the quality of providers and the importance of ensuring that the higher education provision offered in whatever modes and forms meets acceptable local and international standards. The world itself has, in my opinion become one – as all of us are no longer citizens of one nation but part of a global citizenry.

Quality assurance (QA) has thus become a critical factor for ensuring educational relevance. Higher education is a means of sharpening our intellect and therefore is valuable in its own right. However, it should also prepare us for the world of work and enable us to lead independent lives as confident, engaged citizens. In rapidly changing job markets, higher education systems should provide graduates with relevant skills and competences. This is not only about finding employment after graduation, but also about being able to adapt to future labour market needs and adjust to career changes. A new range of competences such as adaptability, team work, communication skills and the motivation for continual learning have become critical.

This new configuration of the higher education landscape is being accompanied by unparalleled challenges with intense pressure being put on HE institutions to adjust their program structures, curricula, teaching and learning methods to adapt to these new demands. But it has concurrently triggered a paradigm shift not only in the way quality is perceived, but how the QA systems and procedures are being applied to the sector as well as how quality is measured or monitored.

The need for a new education

Conventionally, education has been understood as preparation for life, as personal realisation, and as an essential element in progress and social change, in accordance with changing needs (Chitty, 2002).

Orr (2004) declares that if certain precautions are not taken, education may equip people to become "more effective vandals of the earth". He describes education of the sort we have seen thus far as a possible problem and argues for a new type of education:

"Education, in other words, can be a dangerous thing (...). It is time, I believe, for an educational perestroika', by which I mean a general rethinking of the process and substance of education at all levels, beginning with the admission that much of what has gone wrong with the world is the result of education that alienates us from life in the name of human domination, fragments instead of unifies, overemphasizes success and careers, separates feeling from intellect and the practical from the theoretical, and unleashes on the world minds ignorant of their own ignorance." (Orr, 2004: 17)

Education for Sustainable Development (ESD) has accordingly, emerged as a paradigm for revising and reorienting today's education. ESD consists of new forms of knowing and learning how to be human in a different way. This education aims to contribute to the sustainability of personal integrity, or in the words of Sterling (2001), to the integrity of the spirit, heart, head and hands.

These principles for lasting human development, formulated at the 2002 World Summit on Sustainable Development in Johannesburg, imply lessons that largely coincide with the four pillars of education set out in the *Delors Report*: learning to know, learning to do, learning to live together and learning to be. In the context of ESD, UNESCO (2008) suggested the inclusion of a fifth pillar: learning to transform oneself and society.

In a sense, education must lead to empowerment: through education, individuals should acquire the capacity to make decisions and act effectively in accordance with those decisions, and this in turn entails the ability to influence the rules of play through any of the available options. Thus, education consists in developing not only personal but also social qualities.

Reformulation of higher education

Over the last decade, higher education has accordingly been placed high on national agendas worldwide. Though HE has so far demonstrated its crucial role in introducing change and progress in society, with the transformation taking place globally, current needs suggest that we must learn to view the world and therefore education, in a new way.

HE is today considered as a key agent in educating new generations to build the future. But this does not exempt it from becoming the object of an internal reformulation. According to the *World Declaration on Higher Education for the 21st Century* (1998), higher education is confronted with a number of important challenges:

▪ **Changes in universities**

Universities whose mission are to educate, train and carry out research need to revisit their approach to higher education with regard to such issues as ethics, autonomy, responsibility and anticipation.

▪ **Changes in knowledge creation**

Interdisciplinary and trans-disciplinary approaches to higher education need to be encouraged as well as the exploration of non-scientific forms of knowledge.

▪ **Changes in the educational model**

The way teaching/learning takes place needs to promote the development of critical and creative thinking. Furthermore, the world is undergoing rapid transformation with new jobs emerging that require different set of skills and attitudes.

▪ **The competencies common to all higher-education graduates**

Graduates should be determined and the corresponding expectations should be defined through desirable graduate attributes so that they possess the attributes that makes them readily employable after they leave the university.

▪ **Teaching and learning**

Must be more active, **connected to real life** and designed with students and their unique qualities in mind.

▪ **Changes for social responsibility and knowledge transfer**

The work of higher-education institutions must be relevant – what they do, and what is expected of them, must be seen as a service to society; their research must anticipate social needs; and the products of their research must be shared effectively with society through appropriate knowledge-transfer mechanisms.

▪ **Digital wisdom**

The potential of **ICT** in the creation and dissemination of knowledge should be fully tapped and create what Prensky (2009) calls *digital wisdom*.

Equipping students with 21st century skills

Thus, while we may not know exactly which jobs will come on stream now and possibly in next 5 to 10 years, we have a good idea according to current thinking of which skills will serve society best in the future – analytical thinking, problem-identification and solving, time management, adaptability, and the capacity for collaboration and effective communication. Yet it is currently recognised that this itself may be a limiting factor:

"…preparing students for jobs that don't yet exist… using technologies that haven't yet been invented… to solve problems we don't even know are problems yet" Preparing Students to Meet Tomorrow's Challenges in Education

Sally O'Connor, Program Director, National Science Foundation, USA. In world of education the buzz talk around is how to equip youth with 21st century skills. This topic is engulfed around employability. Complex problem solving is just one of the soft skills that employers across the world need today. Finding better ways to teach these skills is urgent for reducing unemployment around the world, especially for youth in emerging markets. Global studies indicate that around one-third of employers are unable to recruit due to a lack of

adequately trained applicants. The reasons for the mismatch are no mystery. The world of work has been changing far more rapidly and unpredictably than education provision. While traditional education evolves at the pace of a glacier, 90% of jobs created come from the private sector, where markets change constantly.

Employers worldwide need workers who blend soft and hard skills. They want workers who have technical expertise, and can hit the ground running, work collaboratively in teams and know how to analyse problems by thinking critically. The types of skills students need to succeed in today's knowledge-based, globally-competitive economy are very different from in the past; and traditional higher education programs don't often address this full range of qualities.

The development of 21st century skills is a stated priority in many countries. In discussing the types of skills necessary to prepare students for the workforce of the 21st century and beyond, the academic skills of the past are still relevant. The basics of Mathematics, English, and Science remain important but with broad access to information *via* the Internet, rote memorization of facts is no longer the skillset that is needed. A new set of skills is required that would create a complete leaner who is ready to enter and thrive in the workforce of the future. This new skill set should, amongst others, include such characteristics as:

- **Critical thinking and problem solving**

Businesses don't feel that many students enter the workforce with skills related to non-routine thinking and solving complex problems. From the perspective of employers, these are key skills for high-skilled, high-paid jobs.

- **Creativity and innovation**

Employers want individuals who think outside of the box and develop new solutions to complex problems. While such skills are extremely important, they can be hard to measure.

- **Collaboration & team work**

The workforce of the future will be diverse and globally distributed. Individuals must be able to collaborate and work across multiracial and multicultural environments.

- **Question formulation**

Ideal employees can formulate and ask appropriate questions, which show higher-order thinking. Some schools have begun adopting pedagogy that includes working with students to develop skills to formulate questions.

- **Global awareness**

In the past, students have been somewhat isolated. Going forward, employers want students with a sense of global awareness.

- **Communication skills**

Thinking and problem solving are critical, but solid oral and written communication skills are also essential, and often lacking today.

- **Technology skills**

All students need to be comfortable with, and able to use, technology

To summarise, every student in the 21st century needs to be able to have a set of skills apart from their technical know-how learnt in higher education institutions, which enable them to work in a global setting.

So if this is the expectation, it is without doubt that HE institutions must evolve to equip students with skills and capacities to allow them to fit into the global market place. Supporting this premise is that there already indications that young people today could have as many as 16-17 different jobs in 5 industries (Alan Ritacco, A. & McGowan, H.E Academic Impressions, 19 Sept. 2017).

However, this list of desirable attributes have been further extended in the last couple of years and this includes entrepreneurial skills, financial literacy, life skills, people skills, self-direction, personal and social responsibility, and character and citizenship.

Changing the educational paradigm to develop 21st century skills

HEIs worldwide need to embrace fundamental and systemic changes to develop the 21st Century skills. In this regard,

- There is a need to make big, bold changes which simply means the revamping of their sense of mission and purpose, ….. a clear vision on the part of HEIs
- Leaders appointed must understand the educational environment and must drive the changes that are needed. Leaders with vision, courage, and the ability to attract others must lead these changes.
- We need to give greater attention to teachers in efforts to reform education. They should be protagonists of education transformation, and need to receive the necessary upskilling and preparation necessary to become empowered professionals and leaders of the process of change.
- There is much to learn from one another and especially from high- achieving countries (Singapore, Finland) in how they select top candidates for teaching, screen them rigorously, assess on the front end, invest heavily in professional development, and provide mentors, tools, and resources for support.
- Involving communities in broader educational efforts. This includes forming partnerships between HE institutions and Industry and the Community that create an overall culture and climate of achievement.

Existing means to assess quality in higher education

Quality assurance is crucial to bring about the much-needed changes that higher education requires. It is accepted today that quality has to be at all levels and should be assured internally and externally. Harvey and Green (1993) identify five categories or ways of thinking about quality. As cited in Watty (2003) key aspects of each of these categories can be summarised as follows: exception, perfection, fitness for purpose, value for money and transformation.

The debate about quality in HE has shifted from the role and forms of quality assurance required in HE to what should be the more effective approaches to quality assurance. The pressures of mass higher education and financial constraints have changed the conditions of higher education in such a way that the central component of higher education systems comprise both internal and external validated methods of quality control. Adding to these domains is the need to ensure employability of the stakeholders as a possible outcome.

Quality assurance

The traditional practices of assuring quality in HE is based mainly on national standards that relates to the establishment of universities and HE institutions and this has given rise to the emergence of agencies and organisations specifically designated to look into the quality assurance of institutions delivering programmes.

Growth in the number of institutions offering distance learning, and the higher numbers of students enrolled in DE poses serious challenges for quality assurance agencies. There is a greater number of providers of distance learning to be monitored, in a greater variety of learning sites and modes.

Another challenge is the growing trend of (international) student mobility. With greater number of students choosing to enrol in other countries as part of their degree programme; their study plan must be evaluated and benchmarked with the academic work they might have completed in their home country or institution. Difficult issues that quality assurance agencies have to come to grips with are thus the assessment and monitoring issues that will arise as increasing numbers of students seek to complete an entire degree programme or a specific component of a programme in another country. Thus, decisions are required to revisit assessment procedures to accommodate the variation in the study pattern that keeps on evolving.

As quality assurance agencies develop frameworks to monitor quality in HE, it is equally important that quality assurance procedures do not act as a barrier to the emergence of creative and innovative pedagogical developments and course design. Institutional strategies should set out a coherent framework for the development of new modes of delivery as part of an institution's offering, the embedding of innovative technologies and pedagogies curricula, and the provision of appropriate training for academic staff and student. Robust processes for assuring the quality of higher education provision is a fundamental requirement for instilling trust in and recognition of qualifications.

New ways of assessing quality in higher education?

As higher education evolves, it is evident that many challenges and issues will have to be solved and new ways of assessing quality be sought. Any country that wants to enhance the international competitiveness of their higher education, needs to embrace international standards of assessment or evaluation for their national quality assurance mechanisms, especially in fields such as engineering, architecture and medical science. International experts should be invited to participate in evaluation activities. Quality assurance mechanisms need to be more independent of government through a real third-party evaluation so that higher education can be more accountable and credible. This is a serious issue in developing countries where government involvement muddies the waters.

Review of frameworks

The frameworks of quality assurance of higher education must be adapted to each country and to all types of higher education institutions/providers: public/private, newly established, degree awarding, branch campuses, transnational, distance/online learning etc.

With new attention to learning, it is also necessary for quality assurance systems to re-examine the criteria for monitoring the quality of higher education institutions.

In traditional terms, many attributes of a university were considered when its education was assessed: its library and classroom quality, the strength of its staff credentials or the reputation it had for providing good education. Electronic methods of instructional delivery call into question whether and how such institutional characteristics matter. So too, international study challenges the relevance of physical setting putting into question the purpose of site visits of an institution.

Quality assurance agencies will need to work with higher education institutions to develop effective ways to assess learning accomplishment. They must also develop appropriate inspection methods with a new focus on learning, regardless of its setting or provider. New approaches and models including examinations and other methods must be developed to test students when they complete programmes or specific units of learning. Some developmental work has to be conducted in view of developing new and different assessment and inspection methods for different learning circumstances.

Value-added approach

A value-added approach is the best way to assess student learning and higher education has yet to commit itself to developing reliable measures to this end. Value-added means what is improved about students' capabilities or knowledge as a consequence of their higher education at a particular institution. Measuring value requires assessing students' development or attainments at the start of their higher studies and evaluating those same students after they have had the full benefit of their higher education. Value-added is the difference between their attainments when they have completed their education and what they had already attained by the time they began.

Assessing outcomes with new indicators

Measuring the outcomes of HE is to evaluate students as they graduate (or shortly after) on the skills and capabilities they have acquired or the recognition they gain in further competition. The most frequently used outcome is the measurement of *retention rates* but there

is a need for other indicators. There is a need for outcome measures that assess students' attainments along a variety of dimensions: communication skills- speaking and writing; quantitative abilities, problem solving, understanding of their own culture and of the cultures of others, development of a sense of civic responsibility, and the like. Such outcomes measures could be used in measuring value added. People with the right expertise and mobilisation of resources are needed to measure such outcomes.

Employer involvement

Employer involvement, either formally or informally, in the revision of study programmes would help identify the knowledge, skills, and attitudes graduates need. Employers can also revise programmes for students who are under their supervision as interns. Their feedback on student performance can be conveyed to the university and discussed by members of the programme review committee, supporting both the revision of existing courses and the introduction of new ones.

Embedding employability in the curriculum

Higher education institutions need to embed employability skills within their curricula but it is important **not** to see it as a 'bolt-on' to existing courses. Employability needs to be integrated into a course so that obtaining a broad range of employability skills is seen as an integral part of completing that course and, is delivered in such a way that it is obvious to the student why they are being equipped with those skills.

The responsibility for making employability provision work more effectively is neither just the responsibility of higher education providers to make it more central to the student experience, nor just the responsibility of students to make use of the existing provision. It is also necessary for employers to engage with the system. They need to engage with higher education providers by, for example:

- providing guest lectures
- giving advice on how to enter their sector
- supplying the work placements, internships, and workplace-based training opportunities that higher education providers and their students need.

Plus there is the need of regulators to ensure such involvement is not only incorporated but implemented to ensure skills are delivered. This is critical as higher education institutions market skills that will make the stakeholders employable on graduation.

Challenges and capacity enhancement needs

Effective quality assurance depends on the availability of highly qualified staff. Capacity building in HE institutions and Regulatory agencies are therefore key to driving quality in the HE sector. But what is really needed is the question? Should *status quo* be maintained? Or should we rethink what is required?

Technical capacity is the most pressing constraint in many countries. This manifests itself in three ways:

- insufficient numbers of adequately trained and credible professional staff in QA agencies to manage QA processes with integrity and consistency across institutions/programs and over time. This is a significant issue in developing countries;

- **Self-evaluations and peer review**

inadequate numbers of academic staff in HEIs with knowledge and experience in conducting self-evaluations and peer review, especially in countries that conduct system-wide reviews; and

- **Senior staff**

Strain on senior academic staff in HEIs many who are not grounded in QA having to support both their own internal quality systems as well as external quality assurance processes of their national agencies.

▪ **Assuring the quality of distance learning and new modes of delivery remain a challenge in most countries.**

Although QA agencies have responsibility over distance and e-learning, accreditation in these areas is still lacking. In most cases, national standards do not exist or are under development. Are those in QA agencies trained in assessing such modes.

▪ **Considerations for ICT-facilitated cross-border provision of higher education**

have not been adequately factored into existing quality assurance systems especially in developing countries. Development of quality standards and verification of compliance for distance education require new skills which are currently deficient in most countries. Given that resources are limited, networking and experience sharing at sub-regional and regional levels could accelerate the rate of diffusion of these skills.

▪ **Quality assurance and quality of graduates**

Little is known about the impact of quality assurance on the quality of graduates, employer attitudes towards graduates, and research outputs of tertiary institutions; that is, whether implementation of a rigorous QA system actually improves the quality of graduates that join the labour market and the research output of institutions. Though no studies have been undertaken, anecdotal evidence suggest that employers are paying attention to the results of program accreditation and ranking of institutions. However, hardly any information can be found on the impact of these processes on the quality of graduates joining the labour market as well as on research output.

Options for capacity enhancement

To address the above challenges, the following options are suggested for consideration by HE Institutions, policymakers and QA practitioners:

Adopt a stepwise development strategy.

Given existing pressure on HE systems and institutions to conform to international norms, a stepwise strategy is the most prudent approach. For many countries, the emerging convergence on rigorous QA practices is unaffordable, given existing constraints in capacity. Each country needs to assess its capacity and structure its QA system to match available resources.

Building a culture of quality within HEIs

Responsibility for quality of higher education ultimately rests with the HEIs. Capacity building efforts should be directed to building a culture of quality within HEIs. Without a strong culture of quality in institutions of higher learning, there is little chance of success at the national level.

Research based changes

One of the critical notions of quality is to ensure the research keeps up with the changes planned at institutions. Two levels of capacity building need to be considered. First and foremost are HEIs using such research in a timely manner with their visions to deliver quality courses? Second, consideration is – are the QA agencies keeping up with the pedagogical changes and using this as a possible yardstick to solicit the necessary changes to ensure skill sets are delivered.

Training of staff in self-evaluation and peer-reviewing

A necessary pre-requisite is training of staff in self-evaluation and peer-reviewing. Involvement of peer reviewers from other institutions within or outside the country in self-assessment exercises can enrich the process, but selection must be done carefully to justify the high costs involved.

Partnership with foreign institutions and QA agencies

This sound QA experience can help to supplement local capacity in the short-term and also bring in relevant experience from other regions. However, this must be weighed against the costs involved.

Technical assistance

The need for technical assistance to develop quality standards is urgent, particularly as regards regulation of e-learning, innovative teaching approaches and cross border delivery of tertiary education, where expertise is very limited.

Regional collaboration in quality assurance

This is particularly relevant to Africa, given the large number of small countries with fragile economies and weak higher education systems. Desirable forms of regional collaboration include peer reviewing for accreditation purposes, regional accreditation agency instead of national ones (especially for small countries), common standards and guidelines for cross-border education, mechanisms for credit transfer and recognition of qualifications, and sharing of experiences. But for regional collaboration to work well, increased commitment by governments and continued assistance from international development partners are critically necessary.

Governments and national agencies

There is a critical need to consider reviewing tertiary education funding policies such that allocation of public resources to tertiary institutions is linked to quality factors as a strategy for encouraging institutions to undertake quality improvements. Without such a linkage, effective response to quality assessment recommendations by public HEIs will be limited, and eventually, QA systems might lose credibility.

Further work on the link between QA and labour market

This I believe is critical in the current market place. Such links I believe will empower QA to a point where skills development needs are addressed ensuring higher probability of employment.

Concluding remarks

Governments, employers, civil and social leaders increasingly acknowledge that the HE system needs to develop a new set of 21st Century skills. Without sustained efforts to help students gain the competencies that prepare them to meet the demands of democracy, competitiveness and life, HE are increasingly irrelevant.

The development of these 21st Century skills though necessary is a challenging endeavour**.** New types of schools, leaders, instructional processes, and teachers are indispensable to successfully accomplish this effort. Governments have therefore the responsibility of providing policy direction, incentives and regulatory frameworks for structuring the supply of education services to accommodate student demand and producing a pool of educated citizens and workforce that would meet the community needs.

Responsibility for quality of higher education however ultimately rests with the HEIs. With the unparalleled challenges facing HE institutions to produce employment ready graduates, a paradigm shift is needed in the way we approach quality; that would instil a new quality culture within our HEIs and lays the basis for building sufficient knowhow to handle the current and changing landscape. Finally, quality agencies need to re-evaluate the way they go in to ascertain the achievements of higher education institutions.

Maybe the educational shift and challenges to measure quality is best summarised as follows:

"When you leave here the idea is not that you will get a job, but that you will create a job,"

First-year student, African Leadership Academy, Johannesburg, South Africa

II.   INTERNAL QUALITY ASSURANCE IN HEIS

HIGHER EDUCATION IN INDIA: ISSUES AND CONCERNS

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Abstract

Educational opportunities and traditions have been able to produce graduates, capable only of pursuing limited careers, but, in the new globally competitive environment that is emerging in the country, the Indian student is now required to develop a multifaceted personality to cope up with the rapid changes in the world at large. This calls for the all round development of body, mind and spirit, through the educational processes in the institutions of higher education.

Keywords: *Higher education, challenges, requirement.*

Introduction

The higher education system in India in the post-independence period has grown in a remarkable way, to become one of the leaders of its kind in the world. However, it has many issues of concern, like financing and management including access, equity and relevance, reorientation of programmes by laying emphasis on health consciousness, values and ethics and quality of higher education together with the assessment of institutions and their accreditation. These issues are of prime importance, as it is now engaged in building a knowledge-based information society of the present century with the use of higher education as a tool. With this consideration, the Universities have to perform multiple roles, like creating new knowledge, acquiring new capabilities and producing an intelligent human resource pool, through teaching, research and extension activities so as to balance both the need and the demand.

The new challenge before the country is to become a developed society, which requires that not only a vibrant economy driven by knowledge has to be ushered in soon, but also a new society where justice and human values prevail has to be created. Moreover, challenges in higher education are no longer nation centric but they have already attained global dimensions, particularly after trade in services has been brought under the purview of the WTO regime. With the explosive growth of knowledge in the past century and with the development of handy tools of information and communication technologies as well as of other scientific innovations, competition has become a hallmark of growth all over the World. As a result,

knowledge is not only going to be the driver of Indian economy, but also, it is going to permeate into all the strata of Indian society for a better quality of life and living conditions. Therefore, India has to rise to the occasion urgently and reorient its higher education system to be vibrant, competitive, meaningful and purposeful. Besides, there is absolutely no substitute to quality of higher education, although the country has strived for a long time with the serious problem of meeting the quantity needs of our society. It is, therefore, essential that a careful balancing of the two is given priority to meet the twin requirements of the society in the foreseeable future.

Management of Higher Education

The Indian higher education system is one of the largest such systems in the World. It is estimated that during the following Five Year Plan period, there will be a tremendous pressure of numbers on this system and a large number of additional students will be knocking at the doors of higher education institutions in the country. The new regime under WTO where competence is the cardinal principle of success in international operations has made it abundantly clear that the country should exploit its excellent potential in higher education and training facilities and prepare itself to export the Indian brand of education to foreign countries.

1.1 Public/Private Partnership

Indian higher education system escalated with establishment of several Institutes all over the country to generate a

nd disseminate knowledge coupled with the noble intention of providing easy access to higher education to the common Indian. The deregulating mechanism of control started with the granting of "Autonomous Status" to identified Colleges in the 1970s. Some of these Colleges have graduated further to receive the "Deemed to be University" status in later years.

1.1.1 Suggestions

1. Responsibility to provide the eligible with good quality higher education at reasonable cost.
2. 'no talented person shall be denied access to higher education opportunities on the grounds of economic and social backwardness'.
3. Industries may be encouraged to be partners with educational institutions directly for the development of human resources dedicated to their interests. This could happen in the areas of creating infrastructure, faculty sharing and direct support with funds.
4. The industries shall be encouraged to establish state of the art Research and Training Centers to develop the necessary specialized man power.
5. The areas not capable of attracting private funds shall be supported sufficiently well from public funds. This, as indicated earlier, is essential for the balanced intellectual growth of the society.
6. Strong quality control measures to assure performance above an acceptable benchmark is essential for the institutions.
7. A Total Quality Management for courses offered, monitoring the achievement of the students at all stages of the course, shall be introduced at all higher education institutions.
8. Empowering the students to take up dual degree programmes. Such a measure will turn around many Colleges from the non-performing class to the performing class. This is an area where public/private partnership has a creative role to play.
9. Designing courses with relevance to the future and developing the necessary manpower to deliver them is a challenging task. All this calls for a team of professionals in different areas to come together to develop proactive strategies for higher education to meet the future demands.
10. Good Faculty.

11. Private Universities are a reality now and, as such, strong regulatory mechanisms are to be put in place immediately to monitor and control their activities with the objective of ensuring quality and social accountability. Higher education is a Public Good and cannot be left to the market forces to control. Those who venture investment in this area shall be properly scrutinized. Those with commercial interests dominating over the interests and ethics of higher education shall be eliminated.

12. According autonomous status to all performing institutions will facilitate rapid development of efficient and state-of-the-art higher education institutions.

1.2 Governance

It has been observed that policy framework is carefully planned at the level of the Planning Commission, Ministry of Human Resource Development and University Grants Commission. However, the policies are not fully implemented mostly because of faulty management of the institutions of higher education. The administrative structure of the Universities, which was devised in the pre-independence period, seems to be still continuing. The new challenges facing the system of higher education in the country cannot be met without a total overhaul (repair) of the structure of management of higher education institutions. This has become all the more necessary because of globalization, which requires talent, competence, drive, initiative and innovation at several levels. This cannot be achieved without overhauling the administrative set up of Universities/Institutions.

1.2.1 Suggestions

1. The Governmental control in the Universities must be reduced, so that the University autonomy and accountability are strengthened and academic decisions are taken on merit.

2. New methods and procedures of financial regulations should be devised and direct interference of the finance department in the financial management of Universities, which is counter productive should be stopped.

3. As the Colleges are the feeding sources of the Universities, a better coordination in their working and activities is very much required. The participation of the teaching faculty in working and activities through a democratic process should be ensured.

4. Complete transparency should be maintained in the working of Executive/ Academic Bodies and other Governing Councils of the Universities. There is an urgency to review the University Acts in different States and revise the same in the light of the new requirements and the challenges being faced by the Universities. New technologies of information and communication should be utilized for obtaining administrative efficiency.

5. Higher Education should be developed as an infrastructure for social and economic growth of the Country.

6. Student involvement in the area of University/College governance should be encouraged.

7. Political interference in the appointment of University teachers and administrators should be totally stopped.

1.3 Access and Equity

Today the world economy is experiencing an unprecedented change. New developments in science and technology, media revaluation and internationalization of education and the ever expanding competitive environment are revolutionizing the education scene. A paradigm shift has been noticed in higher education nowadays, from 'national education' to 'global education', from 'one time education for a few' to 'lifelong education for all', from 'teacher-centred education' to 'learner centred education'. These changes make new demands and pose fresh challenges to the established education systems and practices in the country. Because of interdependence and integration of world economy in recent years, the Indian higher education system has a new role and a challenge to provide to the nation and the world at large, skilled human power at all levels, having breadth of knowledge and confidence to effectively confront the social and economic realities.

It is worth noting that while India has the second largest system of higher education, next only to USA, the total number of students hardly represent 6 percent of the relevant age group, i.e., 18 - 23, which is much below the average of developed countries, which is about 47%. Thus, access, equity, accountability and quality should form the four guiding principles, while planning for higher education development in India in the twenty-first century.

It is true that enhancing social access to higher education is still important in the country. But, the major challenge before the Indian higher education system is to bring equity in quality of education across the length and breadth of the country. This is closer to the heart of students in rural, semi urban and urban areas, because they also wish to be able to participate in the new economic revolution.

Several social, economic and political reasons seem to act as constraints to access and equity in higher education in India. Poverty leads to high drop- out rates even at primary, middle and secondary school levels. Lower status of women, lack of easy access, lack of implementation of existing programmes, inadequate utilization of resources, absence of political will and inadequacies in coordinated actions across all equity fronts within institutions seem to be the other reason. Financial constrains also often form a significant factor in advancing equity.

1.3.1 Suggestions

1. Strategies for higher education should be set within an educational chain extending from early childhood to post- graduate education to career advancement. Improving the interrelationship of all stages and levels of education should be a long - term policy goal.

2. Rural, urban and gender disparities must be kept in mind by policy makers in planning and implementing the higher education system.

3. While quantity is important, say achieving, double digit percentage for higher education, quality is paramount. Higher education should continue to be subsidized by the Government in an adequate manner. For improving the quality in education the role of public sector should be enhanced.

4. A liberal milieu in the Indian Universities must be reconstructed. Diversity of opinion and critique of society and its processes need to be encouraged.

5. Policies of higher education should be designed to strengthen indigenous research agenda.

6. One reform that is urgently needed is the right to information in the institutions of higher learning. Transparency in the functioning at all levels is required so that those committing wrong are deterred.

7. It is recommended that the method of selection of Vice Chancellors must be changed urgently, to make them accountable to the academic community and not to the political or bureaucratic bosses.

8. Policies of our country based on simplicity and sharing of facilities within and across institutions must be established and encouraged.

9. Increasing reliance on the generation of internal revenues through consultancy and interaction with industry may produce imbalances in the Universities across various disciplines of study.

10. New models for higher education including the following aspects need to be created and adopted in the country:
    (a) extended traditional Universities
    (b) technology based Universities, and
    (c) corporate Universities.

1.4 Policy Planning for Export

Increasing economic integration across the World over the past decade has cast tumultuous impact on all the areas supporting human life in the developing countries, which constitutes about 80% of the work force. The so-called structural adjustments in national policies and the new international economic order have brought about severe stresses never perceived before. There are exhortations to the policy planners of higher education emanating from GATT regulations made under WTO formulation e.g. withdrawal of subsidies, reduced control of the State, larger privatization and access to corporate players, designing of courses to meet the human resource needs of the markets in the changed scenario, and reliance on self-financing type management. There are also obligations to allow free import of higher education as a service commodity from developed nations in the form of cross-border supply, consumption abroad etc. The cumulative effect of all these factors and the prevailing competitive environment have hustled the morale, confidence and commitment of the University community in general, even inducing trepidation.

Improving the low level of enrolment 6% in the 18-23 age group ratio, ensuring better equity, access, sound and realistic man-power planning, faster growth of skilled human resource for a self-reliant course of economic development and universalization of basic education are the other major challenges.

In such a skewed and grueling perspective, the University academics and administrators, are confronted with so many challenges calling for knee-jerk response and pro-active approaches to management of institutions of higher education with a high level of professionalism, competence and quality assurance. They are duty bound to tide over the challenges facing the institutions and deliver quality goods and services to the customers and users without any opacity, obsession or prejudice. Outline of the strategies, the imperative scope of expansion, dimensions of diversification, potentials for both short and long-term planning and modalities of placid administrative processes warranted in the contemporary ambience, but in the changed context, have been discussed by experts and researchers.

There was a consensus that without compromising the national ethos of equity and access to higher education to all the intending learners at reasonable cost and to the socially disadvantaged ones at subsidized levels, higher education institutions in India must boost their activities to provide diversified academic products and services of high quality and with a strong market orientation.

1.4.1 Suggestions

1. Most of the areas identified for export of higher education are directly concerned with industries. Therefore, Central and State Governments should introduce a range of programmes and incentives designed specially to improve the links between Universities and industry.
2. The Universities and National Institutes of higher Learning should design their courses in collaboration with industry and such courses be updated regularly, e.g., every year, according to need.
3. There should be uniformity, as far as possible, in the standards of the courses, academic calendar and the examination system of Universities.
4. To provide a broad choice of courses, credit system should be introduced in the Universities.
5. Libraries should be fully equipped with the latest books, journals and periodicals
6. Laboratories should be updated and obsolescence in equipment/facilities should be removed on a regular basis.
7. Working facilities and workload of teachers should be as per the international norms
8. Teachers should be encouraged to attend various conventions, conferences, seminars, workshops in their disciplines to update their subject know how.

9. As per need, hostel facilities should be developed for foreign students in the Universities. And a Foreign Students' Advisor's Office should be created to look after foreign students in a proper way.

10. There should be regular monitoring and evaluation of teaching and research in the Universities and other Institutions of higher learning. A Monitoring & Evaluation (M & E) Unit should be set-up at State level preferably attached to Chancellor's Office; and for its effective functioning; a Statistical Cell should be set-up in each University in the State, under the overall supervision of the M & E Unit.

11. E-learning appears to be a fast emerging mode of global entry at the present time. The Universities and other Institutions of higher education can design their web sites for offering online education worldwide.

12. Other desirable initiatives for export of higher education include:
    • Developing educational products of new models based on flexibility and learner's choice;
    • Preparing students for the knowledge society;
    • Providing methods and styles of working for life-long learning;
    • Arranging facilities for E-learning and distance learning;
    • Ensuring total quality management in the higher education system;
    • Catering to the changing market demands and churn out adaptable work force, instead of providing them scope for narrow specialization.

1.5 Economics of Higher Education

Access to higher education needs to be widened in the country, both within the formal system and through other effective innovative measures, such as a truly open system and networking of Universities. In the globalized World, the State-protected educational system cannot withstand the pressure without making itself competitive. There seem to be four reasons why new policy initiatives should be taken by the Government in this connection.
    • the economic returns of primary education far exceed the returns of higher education;
    • the private returns on higher education far exceed the social returns;
    • the State funding for higher education is insufficient; and
    • since private sector benefits the most from higher education, it is only just that it should make a decisive contribution.

1.5.1 Suggestions

1. Launching lucrative and specific courses for foreign students.
2. Reorientation of educational programmes.
3. Linking education with employment.
4. Launching industry linked human resource development programmes.
5. Reorientation of the management system of Colleges and Universities.
6. Encouraging accountability at various levels of decision making.
7. Providing professional and vocational education and preparation of students for this.
8. Making general education costlier and less widely available than vocational education as to induce more students to take up the latter.
9. Developing innovative educational programmes/products, having high potential for raising resources, making use of the institutional autonomy.
10. Encouraging taking up national/international and Government funded R&D projects.
11. Benefit from alumni
12. Interrelating with industry; some suggestions for which are:
    • Undergraduate industry-related courses should be organized with care, exposing the students to industry problems and requirements;
    • Industry personnel should be invited for extension lectures;
    • Industry personnel should be associated in curriculum development;

- Faculty should visit industries and get acquainted with current problems;
- Better contact with alumni to evaluate teaching methodologies and new demands;
- Vocationalization of Degree programmes;

14. Encouraging optimum utilization of infrastructure and equipment.
15. Encouraging the application of ICT in all processes at the institutions.
16. Introducing 'earn while you learn' scheme for needy students.
17. Funding liberal education by the State and skill oriented education by private sector.
18. Locally relevant higher education to be imparted through vocational courses.
19. Colleges to assess local needs and frame their own syllabi/courses flexibly.
20. Introducing a scheme for rewards/punishments to ensure accountability work.

Conclusion

Education not only makes a man a perfect but also arms him to meet all the challenges in life. He knows how to face the difficulties in a calm and quiet way. Instead of getting worried on the onslaught of difficulties, he will welcome them. This is the only chance in the life of a man to bring to the fore the latent powers which lie hidden in a man, till they are put to use. So long as the man is in a comfortable position, he does not need to exploit this hidden treasure. However, once he is in straitened circumstance, he is compelled to use every bit of energy to fight out the adverse circumstances. This can be done only by an educated man, who is not frightened at the sight of the difficulties, because he does not allow them to get on to his nerves. It is said that it is not ease but effort, not facility but difficulty that makes a man. Thus, the education helps a man to develop a balanced personality.

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AN INSIGHT INTO THE CONDUCT OF SUCCESSFUL PROGRAM REVIEWS – THE SRI LANKAN EXPERIENCE

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Abstract

The Quality Assurance and Accreditation Council of the University Grants Commission of Sri Lanka conducted program reviews for the Faculties of Social Sciences and Humanities of all State Universities in 2017. The paper addresses the significance of reviewers in the review process since selection, training and capacity building of persons to serve as reviewers in the system is imperative for the conduct of successful reviews. A new manual developed for the program review of undergraduate programs in State Universities was used for the review process. This manual specified 8 criteria and standards for each criterion for which the review was undertaken after the submission of a self-evaluation report by respective study programs. This provided the reviewers the possibility to be objective during all aspects of the review process. Procedures specifying reviewer selection, capacity building for reviewers, conduct of reviewers, review chair – profile and role, program review framework, purpose and scope of program reviews, quality assessment - criteria and best practices, site visit by reviewers, assigning scores in a program review, program review report finalization, program review report writing and making review judgments were addressed. The review process was appreciated by the University system as a major step towards quality assurance of study programs in State Universities. Reviewer training has to be continued and extended on how to determine the validity and suitability of evidence, time management during a review, maintaining confidentiality of review details, writing objective review reports and not giving generalized statements and meeting report writing deadlines.

Keywords: reviewers, selection, capacity building, quality assurance.

Introduction

The University Grants Commission (UGC) is the apex body responsible for higher education in all State Universities of Sri Lanka. Currently there are 15 such Universities which come under the Universities Act of 1978.

The Quality Assurance and Accreditation Council (QAAC) of the (UGC) was established in 2005 recognizing the essentiality of assuring quality in higher education.

The QAAC conducted the first cycle of subject reviews between 2005 and 2015. A manual was developed and used by reviewers for this purpose. However, it was realized that the reviews were quite subjective since specific criteria and their standards were not identified in the manual used.

Hence, under a world bank funded project on higher education for the 21st century a new manual was developed for review of undergraduate study programs of Sri Lankan Universities and Higher Education Institutions. This manual which specifies the review criteria and the standards for each criterion aimed to make the review more objective. It was launched at the end of 2015 and the second cycle of review of study programs was initiated.

The first round of program reviews in State universities with the new manual was in the Faculties of Arts, Social Sciences and Humanities. These programs were selected as it was perceived that the programs offered by these Faculties did not address the 21st century graduate profile or attributes, which resulted in a mismatch between the graduates' skills and the labor market skills requirement.

The successful conduct of a program review depends on three aspects; namely, the reviewers, the reviewed program and the reviewing authority which in this case was the QAAC, UGC. This paper addresses the aspect of the reviewer since capacity building for the next generation quality assurance in Higher Education depends to a large extent on the capacity of the reviewers in performing objective reviews.

Reviewer Selection

Identifying personnel to serve as reviewers using the new manual was the first challenge faced by the QAAC, UGC in the review process since it is very important that selected persons should possess required knowledge, skills and attitudes (KSAs) to be an effective and efficient reviewer.

The UGC determined the criteria for selection of reviewers so that equal opportunity was given to academics of the Universities. The application to be a reviewer was open and transparent and reviewers were selected if they satisfied the selection criteria. These were that, the reviewer shall

- be a Senior Lecturer (Grade I) from the Sri Lankan State University System and should have a PhD/MD or be a Professor in the system
- have significant training /experience on curriculum development and /or development of teaching and learning methods, assessment strategies and evaluation strategies
- have significant experience with University research funds
- have supervised a considerable number of undergraduate and postgraduate students
- have a significant number of publications in referred journals, in books, as abstracts and as conference proceedings
- have experience with relevant industry and community which were believed to capture the KSAs required for the reviewing process.

The first reality faced by the QAAC, UGC was that even though the academics selected had expertise and experience in their specific subject disciplines, review of study programs on prescribed criteria and standards were a new challenge encountered by them. A majority did not have experience from the first round and this was the first instance when they themselves were exposed to the concept of external quality assurance.

Hence it was essential that capacity building was undertaken to train the reviewers for successful conduct of reviews.

Capacity Building for Reviewers

The expected profile of reviewers stated in the manual was as follows
- High level of academic achievement in the respective discipline
- High degree of professional integrity
- An enquiring disposition
- Ability to act as an effective team member
- Good individual time management skills
- Ability to readily assimilate a large amount of disparate information
- Good command of data analysis, reasoning and sound judgment
- High standard of oral and written communication
- Experience in academic management and quality assurance

The response to the call by UGC to serve as a reviewer was encouraging and the pool of persons selected based on the advertised criteria were requested to participate in a mandatory reviewer training before they were assigned to reviewer panels since it was imperative that

selected persons were trained to serve in a manner befitting the profile. It was understood however that some of the desired attributes could not be developed with short term training.

Training programs for reviewers were conducted by the QAAC and the following aspects stated in the manual were highlighted as essential qualities in the conduct of reviews.

Conduct of Reviewers
• respectful, professional conduct towards staff and students at all times
• application of good practices provided through reviewer training on the conduct of peer observation of teaching
• acceptance of privacy of the review process
• acceptance of individual responsibility for assigned tasks within the review team
• acceptance of collective responsibility for the review team's judgments

In addition to the training of members of review panels, emphasis was also given in the selection of the review chair (as stated in the manual) and the following was highlighted.

Review Chair – Profile and Role
• lead a team of experts effectively and efficiently
• communicate effectively in face-to-face interaction
• work within given timescales and adherence to deadlines
• delegate responsibilities to the team members
• facilitate writing of the relevant sections in the review report
• compile and edit to produce clear and succinct reports

Program Review Framework

It was essential that the reviewers were also trained on the framework of the review process. It was critical that the reviewers abided by the timelines in order for the review to be conducted effectively and efficiently. Hence the following aspects of the review process were covered in the reviewer training
• Evaluate the SER individually
• Participate in panel discussion on individual evaluations – note key points
• Request for additional evidence by reviewers from the reviewed program
• Site visit by review team
• Send key findings document by review team to QAAC Director
• Send final draft report sent by Chairperson of review panel to QAAC director
• Forward final draft report for Comments from reviewed Program by QAAC director
• Incorporate comments from reviewed program by reviewers

Submit final report by review panel to QAAC Director **Training on External Quality Assurance (EQA)**

It was important that reviewers were trained on the concept of EQA since it is the basis for peer review of programs in all spheres of higher education, facilitated through periodic review and feedback. The distinction between Institutional Review, Program Review and Subject Review were also explained.

Purpose and Scope of Program Reviews

The reviewers were exposed to the overarching goals of program review; namely, achieving accountability for quality and standards, adopting and internalizing good practices, inculcating a quality culture and facilitating continuous improvement of the study program.

Reviewers were informed that the criteria prescribed for scrutiny of programs of study in the manual had been selected by giving due consideration to the feedback received from the academia based on their experience from the first cycle of external review and that eight criteria were considered in a program review. These were:
1. Program Management
2. Program Design and Development
3. Human and Physical Resources

4. Course/Module Design and Development
5. Teaching and Learning
6. Learning Environment, Student Support and Progression
7. Student Assessment and Awards
8. Innovative and Healthy Practices

Quality Assessment – Criteria and Best Practices

The most significant feature of the new manual was that the review was conducted on the quality framework which consists of the above eight 'criteria' for any study program. Each criterion had corresponding 'best practices' and 'standards' resulting in an objective evaluation. The reviewers thus were trained on the scope of each criterion and the standards and best practices therein.

Criteria

In the program review process, the performance of the study program in relation to all eight criteria is considered for arriving at a judgment on the study program as a whole.

Best Practices

For each of the above criteria, quality principles are stated as 'best practices'. In principle, any institutional operations, procedures, etc., become qualified as 'best practices' only if such 'practices' or adoption of such had resulted in value addition to any aspect of the study program.

Site Visit by reviewers

The link between review criteria and what the reviewers would look for lies in the evidence referenced in the SER with regard to each criteria. Hence the reviewers had to be trained on the important aspect of studying the evidence provided by the reviewed program and assigning appropriate marks for the evidence.

Reviewers also had to realize that the Internal Quality Assurance Units (IQAU) and the Internal Quality Assurance Cell (IQAC) of the University have a major role to play in facilitating the process and that the reviewers had to work closely with them when on site during a visit.

During a site visit, the review team upon completion of the preliminaries would have to

- examine and verify (as far as possible) the claims in the program's SER with the Faculty/ Institute of any specific concerns arising from previously conducted program/subject reviews and/or reviews conducted by professional bodies.
- gather any further evidence necessary to enable them to form a view on the quality of educational provision, experience of the students, and the degree of achievement of the intended learning outcomes; and
- assess to what extent the recommendations and criticisms made by the previous subject and program reviews have been addressed.

The team also had to realize that all reviews will draw upon the following principal sources of evidence

- The (Self Evaluation Report) SER prepared for the review
- Evidence referenced in the SER
- Information gathered by the review team during the review visit

Since the knowledge, experience and professional standards of the members are crucial to the conduct of an objective and candid Program Review training had to be provided on the following:

Scrutinizing documentary evidence - The review team should consider all evidence furnished by the institution to verify the claims made in the SER and arrive at judgments.

Meetings/ discussions with staff and students - The review team should have meetings with individuals/ small groups of stakeholders. Observation of teaching-The review team should observe facilities, learning resources and learning sessions. Debriefing – At the

conclusion of the visit, an interactive meeting will be held between the review team and selected personnel from the reviewed program where the Review Chair will present the highlights of the findings and facilitate a discussion.

Assigning Scores in a Program Review

The eight criteria in the program review had differential weightage considering the impact of each on the quality of the program. Reviewers were trained on assigning scores for standards in each criterion. Conversion of raw scores to actual scores on the weighted scale was necessary and the formula and calculation procedure were explained to arrive at a final grade. In the Procedure for Use of Standards, the following terminology had to be explained.

- Standard-wise judgment giving 'standard-wise score'
- Criterion-wise judgment giving 'raw criterion-wise score'
- Application of weightage to obtain 'actual criterion-wise score'
- Calculation of 'Overall Study Program score'
- Grading of overall performance of the Program of Study

According to the manual, the 'standards' are usually established by an authority as regulations, norms, guidelines or principles through general consensus as a basis for comparison. Reviewers also had to be taught on assigning a score for each standard as 3, 2, 1, or 0 which had a descriptor of good, adequate, barely adequate and inadequate. The accompanying explanation of the descriptors were:

3 – No issues/concerns about the strengths and quality of the evidence provided,

2- Few issues/concerns about the strengths and quality of the evidence provided,

1- Major issues/concerns about the strengths and quality of the evidence provided

0- No relevant evidence provided

This had to be explained. A Program of Study could achieve a grade A, B, C or D depending on the final score achieved by them after the calculation procedure.

Program Review Report Finalization

The review report and process prior to publication was another key aspect that reviewer training had to consider. Reviewers were informed that

- the outcome of program review is a published report
- the report will give an overall judgment on the reviewers' assessment of the quality of educational provision and student experience within the program and the standard of the award supported by a commentary on its strengths and weaknesses
- there will be a statement on the level of performance of the program under the Grading of A, B, C or D, based on the Study Program Score expressed as a percentage. The percentage depended on the final score achieved after conversion from raw to actual score and applying the different weightages
- the draft report will be submitted to the QAAC by the review team
- a copy of the draft report will be sent to the Faculty/ Institute for their perusal by the QAAC
- the draft report will be perused by Faculty/ Institute and if there are concerns they will make it be known to the QAAC
- a meeting will be facilitated by the QAAC between the review team and the Faculty/ Institute to resolve the concerns by discussion before finalizing the report

Since the outcome of a Program Review was that after the Faculty/ Institute accepts the program review report, it will enter the public domain through the QAAC website so that all stakeholders have access to it, the reviewer's role in composing the final report was critical to the program reviewed.

Program Review Report (PRR)

It is the final outcome of an external peer review of a program of study.

The purpose of the Program Review Report would be to inform the Faculty/Institute and other stakeholders about the outcome of the review. Hence the Scope of the Report which included a brief introduction and review context of the University/HEI, Faculty/Institute and the Program of Study, a brief description of the review process (schedule of meetings as an appendix), the review team's observations on the Self-Evaluation Report (SER), an overview of the approach to quality assurance by the Faculty/Institute, Assessment of performance of the program based on the standard-wise scores and the actual criteria-wise scores, Final judgment of performance of the program based on the program score and Commendations and recommendations had to be included.

Review Judgments

It was important for the reviewers to realize that Program Review involves analysis of claims made in the SER and validation of the evidence presented during the site visit with respect to the eight criteria and standards in a Program of Study and thus that judgments should not be negative but constructive and supported by evidence, and recommendations should not be prescriptive but stated in a manner whereby the Faculty/Institute will be able to build upon what is already in place and strive towards quality improvement.

The review team would have given an indication of its conclusions at the final meeting held after the review visit and this meeting would have given the Program an opportunity to sort out any factual errors and misinterpretations made by the review team.

Reviewers needed to know that a request for discussion could be made by the reviewed program on receiving the draft report from the QAAC, about the contents of the report, prior to publication.

Conclusion

The site visits of all 41 reviews that were scheduled for 2017 have been completed now and 95% of the final draft reports have been received at the QAAC. The outcomes so far of this exercise is that

- the review process was highly appreciated by the University system as a major step towards quality assurance of study programs in State Universities
- it created enthusiasm for programs to perform well in the future
- it was a good source of information regarding a program's strengths and weaknesses
- follow up and tracking of future activities is essential
- reviewer training had to be continued and extended on the following aspects:
  - determine the validity and suitability of evidence
  - time management during a review
  - maintaining confidentiality of review details
  - writing objective review reports and not give generalized statements
  - meeting report writing deadlines

The QAAC, UGC is confident that the second round of program reviews scheduled in 2018, could be conducted with higher efficiency and effectiveness with the lessons learnt in the first round.

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INDONESIA ACCREDITATION AGENCY FOR HIGHER EDUCATION IN HEALTH (IAAHEH) SUPPORT OF THE INTER-PROFESSIONAL CLINICAL PRACTICE

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Abstract

Indonesia Accreditation Agency For Higher Education In Health (IAAHEH) is a quality assurance agency specially developed to accredit Higher Education in Health which started to operate in 2015 with the support of all National Health Professional Organization and Health Professional Education Association in Indonesia. The quality of health professional practice and educational issues become the main reason in the development of IAAHEH, mainly in regard to the new era of health services globally and nationally. In response to the high demand of quality of education and services, seven health professionals work together to implement the accreditation processes. The Education Standard of each Health Professional, which consists of nine elements of the educational system in Indonesia, was the basis for the development of the instrument for conducting the accreditation process. Accreditation by IAAHEH is not merely to award accreditation status and rank to the study program, but more importantly, it is to build awareness, motivation, and concrete actions that will lead to the institutionalization of culture of continuous quality improvement. These conditions are very important in developing Inter-professional Education (IPE). IAAHEH is aware that its existence plays an essential role in the quality of study programs in health. Therefore, IAAHEH will continuously promote Inter-professional Education (IPE) and will constantly contribute to the improvement of Inter-professional Clinical Practice (IPCP) to be implemented in Indonesia.

Keywords: *Health professional education, education standard, inter-professional education, inter-professional clinical practice.*

Introduction

Accreditation is a process of external quality review used by higher education to scrutinize colleges, universities and higher education programs for quality assurance and quality improvement (CHES, 2000). While internal quality assurance focuses on self-evaluation; accreditation, as a means of external quality assurance, is performed by the external agency to ensure the quality improvement.

Indonesia just adopted a new approach for the accreditation of health study programs through the establishment of Indonesian Accreditation Agency for Higher Education in Health (IAAHEH). Not only does this independent accreditation agency aim to award accreditation status but it also aims to raise awareness, motivation and make conscious efforts to contribute in creating the culture of continuous quality improvement. IAAHEH activities include the provision of consultation for study programs to prepare for the accreditation process by assigning a facilitator for each study program that wishes to be accredited. Then, IAAHEH will also conduct surveillance to evaluate the actions taken by the study program to respond for the

recommendation given from the assessors during the site visit. And therefore, IAAHEH work encompasses both summative and formative activities.

IAAHEH consists of health professionals who continuously work together to achieve IAAHEH goals by implementing all steps of accreditation process. Our collaborative work is the first of many more steps that we will make to achieve interprofessional clinical practices in health services.

Higher Education Accreditation in Indonesia

According to the National Education System Act number 20 year 2003 and the Higher Education Act number 12 year 2012, the National Accreditation Board for Higher Education (BAN-PT) is the authorized institution to conduct external quality assurance of higher education in Indonesia, including higher education in health. The Higher Education Act, furthermore, states that study programs accreditation could be done by an independent accreditation agency. For this reason, professional organisations and educational institutions associations from medicine, dentistry, nursing, midwifery, public health, pharmacy, and nutrition founded an independent accreditation agency in health, and coined the name "Indonesian Accreditation Agency for Higher Education in Health" (IAAHEH). As the government passed the Ministry of Research, Technology and Higher Education decree Number 32 year 2016, it is official for IAAHEH to be the authorized agency for accreditation in health. This also means that IAAHEH has duties for the accreditation of 3,818 health study programs in Indonesia.

The Establishment of IAAHEH

IAAHEH, called as LAMPTKes in Indonesian language, is an independent agency for higher education in health. IAAHEH began operation in March 2015 with the support of the Directorate General of Higher Education, Ministry of Education and Culture through the Health Professional Education Quality (HPEQ) project in 2014, preceded with benchmarking to similar agencies in Canada, USA, and Australia.

The legal foundation of IAAHEH are the following laws and regulations:

a. Law No. 12 year 2012 regarding Higher Education, article 55, paragraph 5 which mentions that accreditation of study program as a form of public accountability is carried out by independent accreditation agencies;

b. Minister of Research, Technology and Higher Education Decree No. 32 year 2016 on Accreditation for Study Programs And Institutions;

c. Minister of Education Decree No. 291/P/2014 on Recognition of IAAHEH;

In the Minister of Education Decree No. 291/P/2014, it is stated that IAAHEH is an independent accreditation agency, established by the representatives of professional organisations and health educational institutions from medicine, dentistry, nursing, midwifery, public health, pharmacy, and nutrition. This establishment is a landmark as the first independent accreditation agency in Indonesia. IAAHEH condusts accreditation for all health study programs in Indonesia, using specific instruments for each health discipline. The process of accreditation in IAAHEH is in accordance with the online Information and Accreditation Management System. Therefore, IAAHEH is viewed as a role model for other professions in developing independent accreditation in the future.

The establishment of IAAHEH is influenced by the following higher education issues in the regional and global levels:

1. Wide acceptance of accreditation as essential in higher education and its study programs to prepare health professionals for practice

2. Proliferation of private educational institutions along with the public ones due to the increasing demand of health professionals

3. An increasing number of health professionals studying and working in international settings

4. New approaches in health professional education including regional recognition agreement for professional education
5. An increasing demand for accountability and quality assurance in higher education
6. Insufficient credibility, transparency and comprehensibility of accreditation system in over half of the countries in the world
7. Limited evidence on the impact of institutions and study programs accreditation on the quality of education and their relevance to professional practice

On the country level, the aspiration to have quality higher education and collaborative clinical practice had driven, and encouraged us to develop an appropriate accreditation system for higher education in health. We need to resolve the issues of low cohesiveness amongst health professionals by implementing interprofessional education (IPE) and interprofessional clinical practice. Also, we need to deal with the individualism of profession that may impede the collaboration as a new paradigm in healthcare.

The establishment of IAAHEH was also intended to respond to the World Health Assembly Resolution (2006) on the rapid scaling up of health workforce production and to affirm our commitment to build competent health professionals through education and training in the accredited institutions. IAAHEH committed itself to conform to the WHO's Framework for Global Standards of accreditation in developing the accreditation process that is inclusive to all health professions.

Referring to the existing global standards (WHO/ WFME, 2004), IAAHEH takes into account the standards of each health profession and the following considerations:
1. Receives legislative support and is nationally legitimate. IAAHEH works are based on the Higher Education Act number 12 year 2012 and the Ministry of Education Decree number 241/P/2014.
2. Has an independent position without the dominance of any stakeholders, and has an authority to accredit or sanction health study programs. Is is stated in the MoE Decree that IAAHEH has an authority to manage the accreditation process and to impose sanctions to those who are unable to meet the standards or breaking the regulations.
3. Implements the transparent process and maintains the efficient administration system. IAAHEH system is supported by high standards information technology and all information associated with the quality assurance is available to the public and is accessible for health educational institutions
4. Has independent accreditation teams representing all major stakeholders. The management and accreditation teams encompass seven health professions; medicine, dentistry, nursing, midwifery, public health, pharmacy, and nutrition. These teams work collaboratively to manage the accreditation process and provide trainings for new team members.
5. Conducts the accreditation process that includes self-assessment, external review and site visit within 3 to 4 days, depending on the type and level of education going to be accredited and on the location of the educational institution.
6. Reports the results to the institution and receives the response. After the completion of the accreditation process, IAAHEH administration will send the results to the head of the study program and give some time for the study program to respond or request for appeals
7. Monitors the accreditation status through the surveillance program. At the end of the site visit during the accreditation process, the assessors will provide recommendations to be followed by the study program. The surveillance program will be subsequently conducted to assure the actions taken by the study program in response to the recommendations given. This program is critical to maintain the continuous quality improvement of the educational institutions and the study program in particular.

Preparation for the accreditation process may contain 1) The accreditation policy, includes role and function of each member of the personnel, management of resources, the criteria of accreditation, 2) Specific instruments and the evaluation matrix for each health discipline; 3). The evaluator team, include facilitators, assessors, and validators; 4) The accreditation steps include the preparation, document evaluation, site visit, council of accreditation panel discussion to decide the accreditation status of the study program and the appeal mechanism. Preparation is done by the representatives of each health discipline.

The accreditation system is developed based on the following seven accreditation standards 1) Vision, mission, objective and strategy, 2) Governance, leadership, management and quality assurance system, 3) Students, (including student affair) and graduates, 4) Human resources, management (faculty and administrative staff, 5) Curriculum, learning approach and processes, and academic atmosphere, 6) Finance, facilities and infrastructure, and information/ ICT management, 7) Research, community services and collaboration.

Since the members of IAAHEH come from various health professions, each member has the opportunities to develop the accreditation tools and criteria based on the updated standards on each profession and refer to the seven accreditation standards. This creates the accreditation system in IAAHEH unique and spesific for each profession.

IAAHEH Profile

Vision of IAAHEH is to ensure global standards of quality for higher education in health and the mission is to implement national accreditation of higher education in health that is sustainable and trustworthy.The core values of IAAHEH are accountable and independent and the objective are: 1) to develop accreditation policies, standards, instruments, and procedures for higher education in health to be implemented by IAAHEH; 2) to ensure the continuous quality improvement of study programs accredited by IAAHEH; 3) to create an integrated accreditation among academic, vocational, and profession levels of education to improve competencies of health workers comprehensively through synchronized instruments; and 4) to ensure continuous quality improvement of study program accredited by IAAHEH that will be able to conduct health service practice based on standardized competencies and public need.

Organization structure

To implement its mission in a sustainable and trustworthy way, IAAHEH has credible staff and reviewers. The staff consists of Executive Board (Chairman, Vice Chairman, Secretary, Treasurer, Accreditation Directorate, General and Supporting Directorate), Head of Division; administrative staffs and IT staffs. Reviewers consist of Facilitator, Assessor and Validator. Human resources in IAAHEH consist of management, head of divisions, staff of divisions, and reviewer. All work of assessors will be evaluated by Board of IAAHEH. The Accreditation Council of IAAHEH is composed of representatives of profession organizations and higher education associations which function independently.

IAAHEH Executive Board is composed of selected persons who have experience as leaders of Higher Education Institutions and from the National Accreditation Board of Higher Education. Heads of Divisions have selected and proposed by a Professional Organization and Education Institution Association who have experience and reputation as National Assessor in specific health field. A Reviewer is a person who has integrity, capability, responsibility and can work independently and free of conflict of interest and coming from at least good accredited health higher education institution all over Indonesia. A Reviewer is selected through strict selection, including a psychological test. After a reviewer is selected, they have to pass an initial training, in order to obtain certificate as assessor. All reviewers should follow refreshing training periodically. Monitoring and evaluation for reviewer performance is conducted by the Board of Directors and stakeholders. The accreditation process and activities are supported by the administrative staff. The organization structure of IAAHEH is in Figure 1.
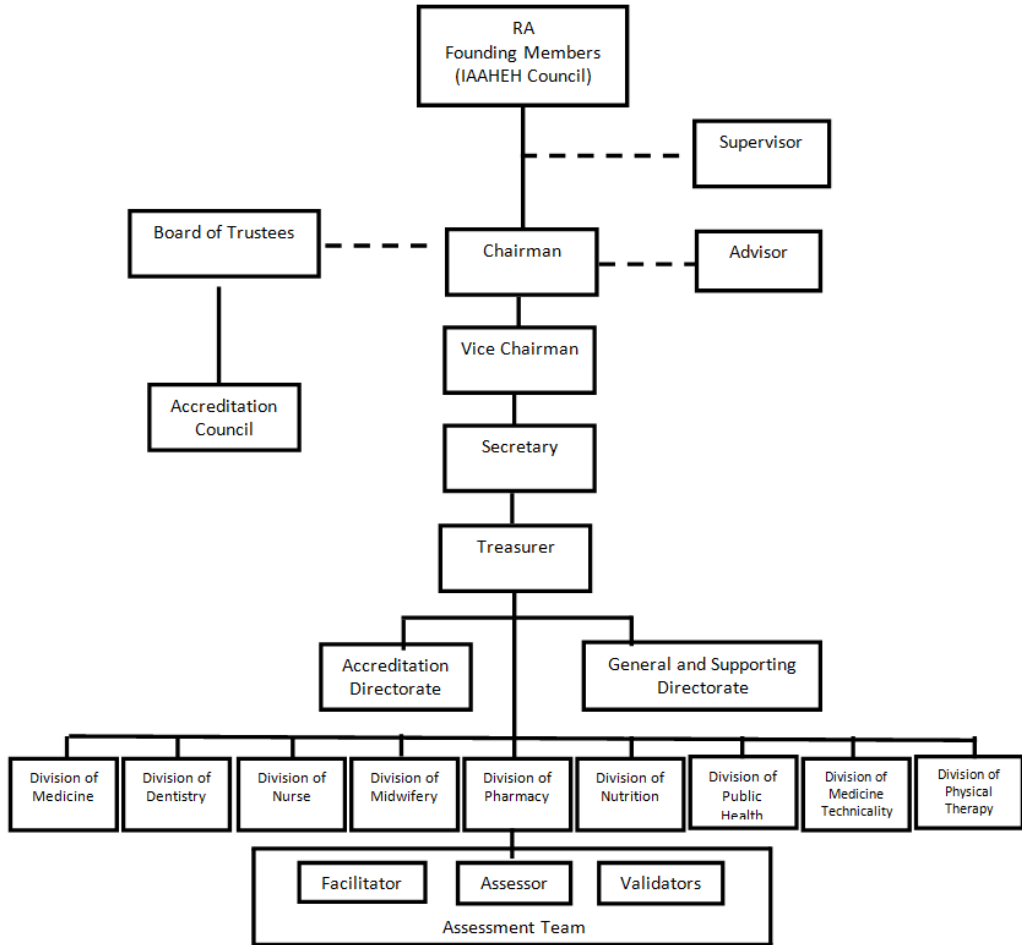
Figure 1. IAAHEH Organization Structure

The Reviewers consist of:

a) Facilitators; Total number is 106 (medicine: 27, dentistry: 13, nursing: 32, midwifery: 19, pharmacy: 10, nutrition: 5, public health: 15).

b) Assessors; Total number is 383 (medicine: 230, dentistry: 30, nursing: 111, midwifery: 75, pharmacy: 40, nutrition: 34, public health: 33).

c) Validators; Total number is 149 (medicine: 2, dentistry: 2, nursing: 22, midwifery: 2, pharmacy: 11, nutrition: 4, public health: 6).

IAAHEH Programs

The accreditation process is started when the study program formally requests for accreditation, or when the previous accreditation status will be expired in a year maximum. The study program has to legally register the request to the Ministry of Education, Technology, and Higher Education. Then, the study program will get an account from IAAHEH, and may submit all documents required for the accreditation in the IAAHEH ICT system.

The accreditation process will take six to nine months to be completed, and uses the Online Information and Accreditation Management System calles SIMAk. The process comprises seven steps, they are:

1. Facilitate the study program to prepare their report to be submitted through the provided online system. This step is assisted by one appointed facilitator and the process is expected to be finished in three months.

2. Documenting the results of evaluation. Two appointed assessors will evaluate all final documents a week after the submission to the online system

3. Conducting field visits. The same assessors will conduct site visits to the institution and study program after the completion of document evaluation step. The site visit will take 3 to 4 working days, depending on the type of study program going to be accredited and the area of the institution.

4. Validating data. All data collected from the site visit and the evaluation report done by assessors will be sent to IAAHEH through the system and will be checked for their validity by the validators team

5. Accreditation decision by councils. All validated data and report sent will be discussed in an accreditation council discussion panel and accreditation status will be decided. Every end of the month, the council conducts a meeting to discuss and analyse the appraisals from the assessors and the comments from validators. The announcement will be sent to the study program two weeks after the meeting.

6. Providing Appeal Mechanism. IAAHEH will send the accreditation status to the head of the educational institution or the head of the study program. If the study program refuses the status given, then they have a month maximum to request for appeals.

7. Monitoring and evaluation. The study program's compliance with IAAHEH recommendations given during the site visit will be evaluated through a surveillance program. This step will be conducted within one to three years after the accreditation status is released, depending on the level or the status achieved. The surveillance for the accredited "A" study programs will be done in 3 years, for the accredited "B" study programs will be done in 3 years, and for the accredited "C" study programs will be done in a year after receiving the last accreditation status.

Accredited Study Programs

According to the data in Ministry of Research and Higher Education data center there are 3,818 Health Study program. Among these since 2015 until December 2017 there were 1,898 (49%) which have been accredited by IAAHEH. Table 1 shows the number of health study programs and table 2 is about the number of study programs which have been accredited by IAAHEH.

Table 1. Number of health study programs

Level / Discipline	Vocation D3	Academic S1	Profession	Specialist	Master S2	Doctorate S3	Total
Medicine	-	87	86	263	30	12	478
Dentistry	-	32	31	36	8	4	111
Nursing	534	351	315	5	18	2	1225
Midwifery	831	4	11	-	10	-	856
Pharmacy	161	181	38	1	19	8	408
Nutrition	65	76	1	-	4	2	148
Public Health	84	221	-	-	56	8	369
Allied Health	363	26	5	-	7	0	401
TOTAL	2038	978	487	305	152	36	3996

Source: PD Dikti, May 2018

Table 2. Study Programs Already Accredited by IAAHEH

Science Program	A			B			C			Tidak Terakreditasi			Total			
Medicine	-	27	168	-	45	57	-	5	7	-	-	-	0	77	262	0
Dentistry	-	7	21	-	13	21	-	1	2	-	-	-	0	21	44	0
Nursing	8	6	10	244	187	173	120	65	58	2	-	-	372	258	241	2
Midwifery	7	1	-	328	6	-	173	-	-	1	-	-	508	7	0	1
Pharmacy	-	20	10	43	25	16	27	23	-	-	-	-	70	68	26	0
Public Health	1	10	-	19	86	-	0	12	-	-	-	-	20	108	0	0
Nutrition	1	8	-	22	14	-	3	2	-	-	-	-	26	24	0	0
Other Discipline	9	-	-	100	5	-	42	3	-	-	-	-	151	8	0	0
TOTAL	26	79	209	756	381	267	365	111	67	3	0	0	1147	571	543	3
Total Rank (SK)	314			1404			543			3			2264			
Persentase (%)	13.9%			62.0%			24.0%			0.1%			100.0%			

Source: LAM-PTKes

Internal Quality Assurance

IAAHEH has an internal quality assurance unit called The Internal Quality Assurance System (SPMI) which makes guidance that is used as a reference by all working units in LAM-PTKes. This Quality Guideline is structured as a guideline for the implementation of Quality Management System (SMM) in IAAHEH management and business processes that conforms to ISO 9001: 2015 standards, Indonesian law or regulations and the requirements of National Accreditation Board of Higher Education (BAN-PT). SPMI LAMPT-Kes is held to monitor and evaluate the service to study program in accreditation program of higher education study of health conducted by IAAHEH on an ongoing basis.

Monitoring and Evaluation

Systematic surveillance refers to a monitoring and evaluation approach being implemented to the accredited study programs, ensuring the quality improvement program is in place. The surveillance is undertaken by evaluating the actions taken by the study program to respond for the recommendations given by the assessors during the site visit. The surveillance team consists of reviewers who reside near the institution, and the representatives of MoE in the district level. The IAAHEH headquarter is responsible for arranging the shedule and the surveillance team.

The Uniqueness of IAAHEH

All specific attributes and activities performed by IAAHEH makes this agency unique and distinct from other agencies. Some of the uniqueness of IAAHEH is as follows:

1. Independent and self funded. Whole financial need of IAAHEH operations are supported by the members and do not depend on the government
2. Deploying advanced information technology system and the expert team
3. Representing all health professions and work as a team in all level of management and accreditation processes
4. Focusing on an individual study program for the facilitation and validation processes including the site visit in the specific areas of the study program
5. Providing the accreditation clinic program to the institutions or study programs that wish to have consultation
6. Developing specific instruments for individual health profession education including the evaluation criteria based on specific education standards of each type study program.
7. Conducting regular refreshing programs for the evaluation team members
8. Systematically implementing follow up mechanism by conducting the surveillance of the accredited study programs
9. Conducting internal quality assurance of the IAAHEH on a regular basis

International Recognition

After its operation in March 2015, IAAHEH continues to evolve, encouraging us to take further steps to be recognized on the international level. IAAHEH began its first international steps by submitting the application for Asia Pacific Quality Network (APQN) recognition In 2016, IAAHEH conducted various activities to meet the requirements, and in January 2017, IAAHEH eventually became a member of APQN.

Specific for medical education, there is a new, global regulation stating that all medical institutions have to be accredited by the World Federal Medical Education (WFME) by the 2023. IAAHEH is committed to conform to the WFME accreditation standards as a response to the global needs, and is currently elaborating these standards within the IAAHEH accreditation standards and criteria for medical education.

IAAHEH supports inter-professional education and inter-professional clinical practice.

A changing health care system with increasingly complex health needs of patients require innovative and efficient concept of patient care. These concepts require key competencies, such as effective communication, teamwork and inter-professional collaboration between healthcare professionals. Inter-professional education (IPE) is an important pedagogical approach for preparing professional students to provide patient care in a collaborative team environment. The appealing premise of IPE is that once health care professionals begin to study together they will be able to collaborate and work as a strong team. Evidence demonstrates that inter-professional collaborative patient-centered practice has a positive impact on the quality of health services.

As already mentioned in the list of uniqueness of IAAHEH, all activities are supported by representatives of seventh health study programs in Indonesia who collaborate to manage and to maintain the activities of the IAAHEH. Continuous discussion, sharing and collaboration among the accreditation team members as the representatives of health professions in IAAHEH create a specific conducive working and social environments. Each profession tries to understand their position and their importance as a health team.These conditions enable each member to develop mutual respect, trust and understanding, and assist the organisation to bring these values as an integral part of the accreditation standards and criteria. These condition are very important value in developing Inter-professional Education (IPE). IAAHEH is aware that their existence plays an essential role in the quality of study programs in health. Therefore, IAAHEH will continuously promote Inter-professional Education (IPE) as a critical component in the accreditation standards and criteria, to practice inter-professional collaboration among its members and will constantly contribute to the improvement of Inter-professional Clinical Practice (IPCP) to be implement in Indonesia.

Conclusion

1. IAAHEH is an independent accreditation agency specific for Health Study Programs in Indonesia which was established in 2014 and fully functioned since March 2015.
2. As an independent accreditation agency for health study programs, IAAHEH has been supported by the representatives of all health professions in Indonesia
3. IAAHEH has accredited 1,898 study programs, recruited 853 health professionals to be the evaluation team in 2017 and also conducted trainings and refreshing courses on a regular basis.
4. IAAHEH started to get international recognition. In January 2017, IAAHEH became a full member of APQN and currently is in the process of recognition by WFME and APQR.
5. Collaboration and cohesiveness among health professionals throughout the accreditation process create a positive atmosphere that promotes inter-professional education and inter-professional clinical practice in Indonesia.

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THE QUALITY ASSURANCE OF TRANSNATIONAL EDUCATION: A UK PERSPECTIVE

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Abstract
This paper outlines QAA's approach to quality assuring transnational education (TNE) – defined as higher education provision delivered in countries different from that where the awarding body is based – and offers an account of its most recent and forthcoming TNE review activity. It will conclude with a consideration of some of the key challenges for the quality assurance of TNE from a provider's perspective, offering advice on how best these challenges can be addressed based on QAA's experience of quality assuring TNE.
Keywords: *QAA (UK), Transnational Education (TNE), inter-agency cooperation, Ireland, Hong Kong.*

Introduction

TNE is a significant and growing part for UK higher education. Over the years QAA has had to develop its quality assurance processes and its reference points in order to ensure that its approach to TNE remain fit for purpose to safeguard the standards and improve the quality of UK higher education delivered overseas. This paper outlines the key features of QAA's approach to TNE, and it will report on the two most recent TNE review activities in Ireland and Hong Kong. The paper will also share some of the lessons learned with regard to the quality assurance of TNE based on QAA's over 20 years' experience in quality assuring TNE. The first section will set the context providing an overview of the UK TNE landscape.

The UK TNE landscape

TNE is an integral and expanding part of UK higher education provision. Over 80% of the approximately 160 UK DABs are engaged in some form or another of TNE, either through distance learning, partnerships, or branch campus arrangements. Significantly this provision is delivered across the continents, as illustrated in figure 1, taken from the Higher Education Statistics Agency (HESA), the UK national agency collecting HE data.

TNE now also represents the main area of growth in UK HE in terms of student numbers, as illustrated by figure 2 below. The latest HESA data for the academic year 2016/17 show that while the total number of students studying on higher education programmes in the UK (2,317,880) has declined by approximately 7.5% over the past five years, and the number of international students studying in the UK has remained roughly constant (442,375), the number of students studying on higher education programmes outside of the UK has witnessed more than a 40% increase over the same period, now largely exceeding the number of international students in the UK (709,323 students).

Transnational students studying wholly overseas for a UK HE qualification in 2014/15
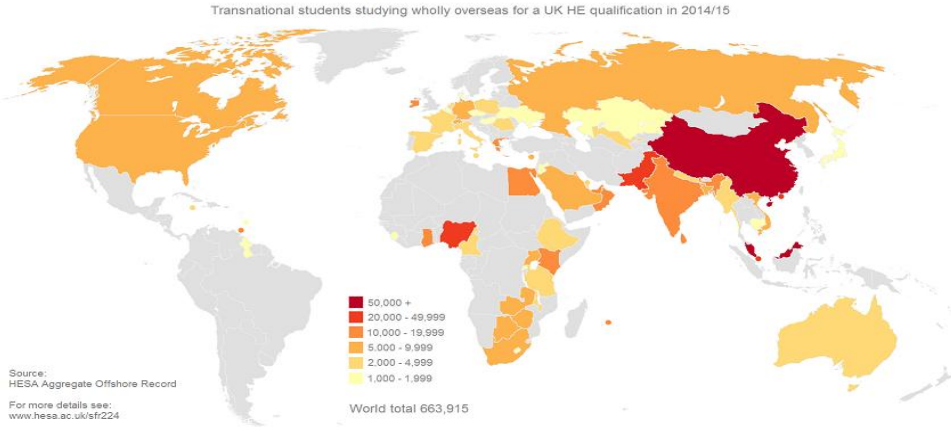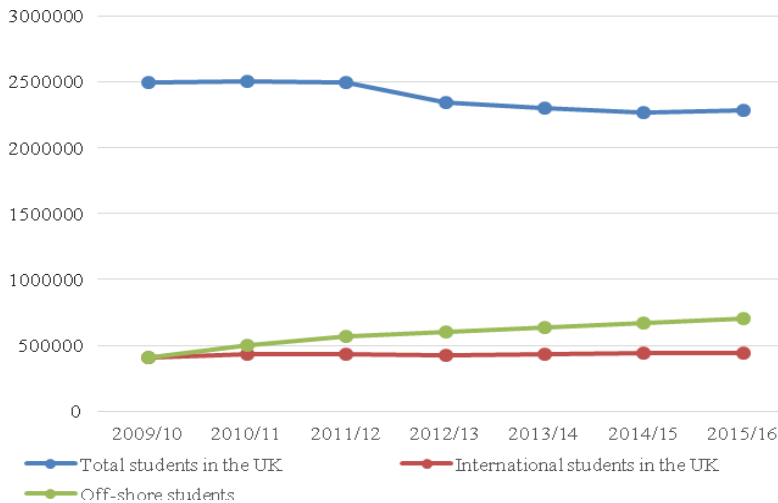
Figure .

Figure . (Data source: HESA)

In terms of host countries of UK TNE the vast majority of TNE students is located in Asia. As illustrated in figure 3, China is now the second largest host country, after Malaysia, and growing faster than any other country. China is also by far the main sending country of international students in the UK, and it has been calculated that over 50 % of Chinese students coming to study in the UK arrive through TNE arrangements; namely, they start their programme of study in China and then they spend a period of their study in the UK (HEFCE 2014).

QAA over the years has had to develop processes that could ensure that its oversight of UK TNE remains effective and efficient in the context of this extended and growing TNE provision. Two ways in which QAA has tried to do so, as I will show in the next chapter, is by adopting a country-based approach and by strengthening cooperation with host countries' quality assurance agencies.
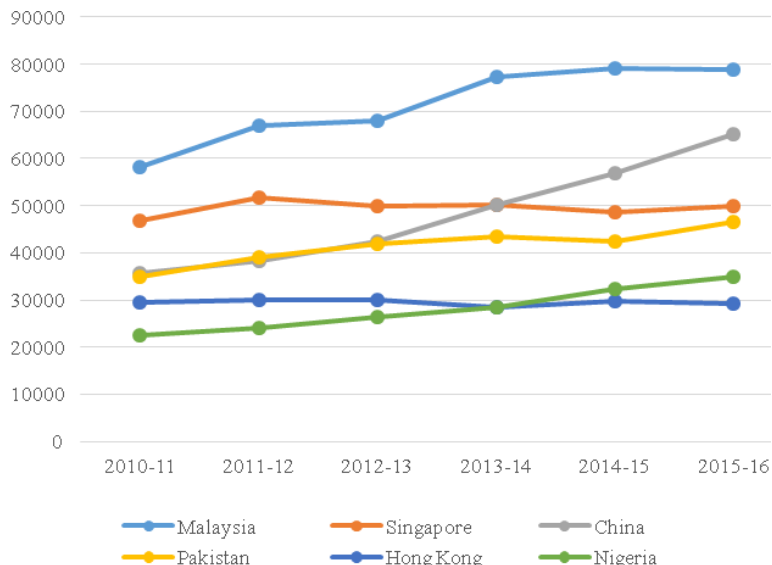
Figure . (Data source: HESA)

The QAA approach to TNE

QAA has always quality assured UK TNE as part of its mission to safeguard the standards and improve the quality of UK HE wherever this is delivered. QAA looks at UK TNE in two main ways: through its institutional reviews of UK providers and through a dedicated in-country TNE review process looking at delivery sites overseas.

QAA's institutional reviews are comprehensive processes looking at the complete range of a provider's higher education provision, including its overseas delivery. However, the focus on TNE in the context of institutional reviews can only be limited to the documentation of providers' policies and processes, and how these comply with the relevant section of the UK Quality Code, *Chapter B10: Managing higher education provision with others*. It would not be viable for review teams to look at TNE delivery sites as part of a provider's institutional review.

For this reason QAA has traditionally complemented its institutional reviews with a dedicated TNE review process which includes visits to overseas delivery sites of UK providers. This review process is aimed at addressing those aspects that institutional reviews are less suited to meeting, in particular testing the implementation of policies and processes for safeguarding standards and enhancing quality of TNE provision, and getting an understanding of the TNE student experience. It is also aimed at maximising the efficiency and effectiveness of overseeing UK TNE in the context of the volume and spread of UK TNE highlighted above.

QAA has traditionally adopted a country-based approach, whereby, on approximately an annual basis, a country with significant UK TNE or of strategic importance for UK HE is selected, and UK TNE provision there is looked at by a review team, including through visits to a sample of delivery sites. This is more efficient and practical than sending review teams to different parts of the world several times a year to look at different TNE arrangements as part of providers' institutional reviews. Over the past few years, for example, QAA has reviewed UK TNE in India (2009), Malaysia (2010), Singapore (2011), China (2012), United Arab Emirates (2013), the Caribbean (2014) Greece and Cyprus (2015), Ireland (2017), and Hong Kong (Special Administrative Region of the People Republic of China) (2018).

A country-based approach also allows QAA's review teams to get an in-depth understanding of the specific features and challenges involved in operating in particular countries, since different countries have different policies and systems for higher education and TNE which will affect TNE provision in different ways. It is important to ensure an informed assessment of TNE arrangements in the context of their particular operating environments and to gain useful insights that could benefit all providers operating in that country.

In addition, a country-based approach allows QAA to establish stronger links with the host country quality assurance bodies and to explore systematic ways in which to cooperate with them to improve the efficiency and effectiveness of its TNE review process. When undertaking in-country reviews of TNE, QAA regularly seeks to liaise with the local regulatory authorities and QA agencies with a particular view to sharing information, data and intelligence and exploring ways in which it might be possible to coordinate review activity of UK TNE to lessen the burden on TNE providers, and on themselves.

Engaging strategically with partner agencies in UK TNE host countries is indeed a high priority for QAA. The volume and spread of UK TNE requires QAA to seek cooperation with host country agencies to facilitate its quality assurance. In quality assuring UK TNE QAA regularly seek to cooperate with host country agencies, to rely on their intelligence and information, and avoid regulatory gaps and overlaps, striving to lessen any unnecessary burden on TNE providers as well on quality assurance agencies themselves.

QAA seeks to strengthen cross-border cooperation in the quality assurance of TNE both at bilateral level, through a number of strategic partnerships with agencies in key host countries for UK TNE, such as China and Hong Kong, Malaysia, Singapore, and Dubai, and at multilateral level, engaging with key international networks. These include established networks such as the European Association for Quality Assurance in Higher Education (ENQA), The International Network for Quality Assurance Agencies in Higher Education (INQAAHE) and the Asia-Pacific Quality Network (APQN), and more recent international initiatives such as the Quality Beyond Boundaries Group (QBBG) and the Cross-Border Quality Assurance Network (CBQAN), specifically aimed at strengthen cooperation in the quality assurance of TNE amongst key sending and receiving countries of TNE. QAA international engagement also includes high profile international projects, such as the Quality Assurance of Cross-Border Higher Education project (QACHE), which led to the development of the QACHE Toolkit for quality assurance agencies, *Cooperation in Cross-Border Higher Education*.

The next section looks at QAA's most recent and forthcoming TNE review activity.

QAA recent and forthcoming TNE review activity

TNE Ireland 2017

The most recent TNE Review looked at UK TNE provision in the Republic of Ireland (henceforth Ireland). Ireland is the second largest host country for UK HE provision in Europe, taking also into account distance learning. It has also been tipped by some as a potential destination for UK universities to open an EU outpost in the aftermath of Brexit. At the same time, national policy developments in Ireland have seen the recent development of an international education strategy and reforms to prevent the abuse of student immigration, which impose limits on the extent to which UK providers can grow their TNE provision in Ireland. Through this TNE Review exercise QAA aimed to respond to possible concerns raised by local stakeholders about the quality and nature of UK TNE arrangements, while supporting the growth of quality TNE provision in the context of Brexit and national policy developments in Ireland. This TNE Review exercise also embodied the commitment made by both QAA and Quality and Qualifications Ireland (QQI) to strengthen inter-agency cooperation in the quality assurance of TNE, through regular sharing of data, information, intelligence and good practice.

Another motivation was that of implementing commitments that QAA and QQI have made towards inter-agency cooperation in the quality assurance of cross-border education, both as part of their bilateral memorandum of understanding and multilateral initiatives. The latter includes the Quality Assurance of Cross-Border Higher Education (QACHE) project led by the European Association for Quality Assurance in Higher Education (ENQA), which issued practical advice to quality assurance agencies on ways in which cross-border cooperation in quality assurance can be strengthened.

The cooperation between QAA and QQI can be seen as a practical example of implementation of some of the advice contained in the QACHE toolkit for quality assurance agencies, Cooperation in Cross-Border Higher Education. QQI shared valuable information, data and intelligence about the local operating framework and UK TNE providers at critical stages of the review process. This contributed to selecting the sample of TNE arrangements to be looked at, identifying areas of inquiry, and briefing the review team about the Irish higher education and quality assurance system. At the same time, QQI's close involvement in the TNE Review process has been valued by QQI, as it is developing its approach to quality assuring the growing outbound Irish TNE. This close cooperation between the two agencies has contributed, not only in developing reciprocal understanding, but also in strengthening reciprocal trust in each other's higher education and quality assurance systems.

Looking at the key findings of the TNE review exercise, QAA's reports found that the geographical and cultural proximity of Ireland made it easier for UK providers and their Irish partners to have robust processes for quality assurance, and that UK universities and their Irish partners have created flexible opportunities that cater for skills needs not currently met by local providers. Generally it is possible to say that UK TNE in Ireland has demonstrated to be student centred, being responsive to the needs of students, both in terms of programme content, addressing local market needs, and in type of delivery, such as part-time and block-teaching meeting the needs of mature learners seeking to up-skills and progress in their career.

TNE Hong Kong 2018

Hong Kong is the 5th largest location for UK TNE, and has traditionally been of strategic importance for UK HE. The majority of registered /exempted in Hong Kong come from the UK. The last time UK TNE in Hong Kong was reviewed by QAA was in 2007. It was therefore important to return to Hong Kong to ensure that the quality and standards of UK providers in a key strategic location was maintained. Another key rationale for selecting Hong Kong as destination for review was the possibility of taking inter-agency cooperation to another level.

QAA and the Hong Kong Council for Accreditation of Academic and Vocational Qualifications (HKCAAVQ) have a long standing partnership, and both are members of QBBG and CBQAN and committed to strengthen cross-border cooperation to facilitate the QA of TNE. As part of the QAA review of UK TNE in Hong Kong the two agencies have carried out joint-review activity.

HKCAAVQ runs a voluntary accreditation scheme for non-local programmes. An accredited non-local programme enjoys a similar status as an accredited local programme, its qualification can be placed on the Qualifications Register and recognised under the Hong Kong Qualification Framework, and its students enjoy financial assistance provided by the Government. As part of the review of UK TNE in Hong Kong QAA shared reviewers with HKCAAVQ as part of a couple of HKCAAVQ accreditation exercises of UK programmes. The reviewers acted both as HKCAAVQ accreditation panel members and QAA reviewers, implementing both processes. This allowed QAA and HKCAAVQ not only to lessen the information burden on providers, as they could rely on one singe set of requested information and single review visit, but also to benchmark processes and standards through their concrete implementation. On this basis QAA's peer reviewers were able to establish that HKCAAVQ's

accreditation decisions can be trusted and relied upon by the QAA for UK quality assurance purposes. This means that QAA won't need to review UK provision accredited by HKCAAVQ in the future.

Looking at the key findings of the TNE Review exercise overall, the TNE review exercise found that UK TNE provision offered in Hong Kong is generally both relevant to the local market and employment needs, and meets the expectations of the UK Quality Code. Processes for the management of TNE in Hong Kong are generally well developed, ensuring that standards and quality are equivalent to similar provision delivered in the UK. Many of the local partners also have well developed quality assurance systems used for both their own awards and those made by non-local degree-awarding bodies. Partnering with multiple local and non-local degree-awarding bodies, many have extensive experience of managing collaborative provision of a scale and complexity that can exceed that of some UK providers operating in Hong Kong.

Lessons learned from TNE Review

Providers face a number of key challenges in ensuring the standards and quality of their degrees delivered overseas and in partnership with other institutions. Two of such challenges have to do with cultural and geographical distance.

Cultural differences require providers wishing to operate successfully in cross-border partnerships to ensure they understand each other's traditions and approaches to teaching and learning and quality assurance, as well as reaching a shared understanding about the nature of the partnership, including its rationale and expectations. It is of crucial importance that partners get to understand where each other comes from and where they aim to go toward through the partnership from the start. In order to achieve this, it is very useful for TNE providers to induct their staff (both administrative and academic) about local partners' culture and operating environments as well as inducting local partners' staff about their approach to and expectations about teaching and learning and quality assurance.

Geographical distance is clearly an important challenge, which can affect the quality and effectiveness of communication between partners and with the students, as well as the provision of services. It is important for TNE providers to strive to minimise the impact of geographical distance on the every day to day management of the partnership and student life. In this context new information technologies have great potential to ensure regular communication between partners and with students and enhance the quality of the student experience by ensuring they can access both academic and other support services. It is also important for TNE providers that their staff are prepared to travel, to ensure regularity of communication, monitoring, and support.

The TNE staff experience is something that TNE providers need to give proper thought when developing TNE arrangements, since, depending on the model of TNE adopted, their success will crucially depend on the availability of both administrative and academic staff availability to regularly travel to the partner institutions. This has significant implications for academic staff in particular, who might be required to travel more often and for longer period, and who might therefore see TNE commitments as additional to their duties and possibly conflicting with career progression aspirations, such as undertaking research, as well as impacting on family commitments and life-work balance. Proper recognition of these challenges will need to be incorporated in any staffing model from the start. In addition, the development and management of TNE arrangements require adequate and specialist staff capacity, for instance to undertake due diligence in all its dimensions, legal, financial, and academic, and keep regular oversight of TNE partnership to maintain and improve their quality. Institutions again need to plan staff resources and capacity from the start.

Another key challenge relates to the student experience. Providers need to ensure TNE students are able to access key academic and extra-academic support services, including the

awarding body's own e-library resources and career advice for instance; and they also need to have procedures in place to collect and respond to students' views. Another challenge is that of ensuring that the experience of TNE students is comparable to that of students studying at the home campus. Recognising that the experience of TNE students cannot possibly be similar or comparable in many aspects to that of students studying in a different country and very different circumstances, from a quality assurance perspective, what is essential is that the experience of TNE students enable them to achieve the standards expected from them at the end of their programme of study. While this will require that students have access to the same set of essential services as home campus based students, and are exposed to same or very similar styles of teaching, and curriculum, it is also important to recognise the different local contexts in which students are pursuing their studies, in order to have realistic expectations about the comparability of the students experience, develop viable and sustainable strategies to achieve those expectations, and importantly adapt the programme of study to ensure that it remains relevant to students who are studying and will pursue their careers in very different contexts. The key challenge here is to strike the right balance between similarity of contents and approaches and their contextualisation to meet different student and competence needs.

In this context it is opportune to reflect on the role that external quality assurance agencies play in facilitating or hindering the development of TNE programmes relevant to the local social and economic contexts by means of their regulatory requirements. Often quality assurance agencies, from both sending and host countries, with the intention of safeguarding the student experience, might put in place too stringent requirements, such as for example that only programmes delivered at the home campus can be delivered overseas, which limits the extent to which providers can develop and offer programmes more suited to the local needs of students, societies, and markets. This might impact negatively the experience of TNE students by contributing to their alienation and disengagement from the content of their programme of study.

The need for undertaking due diligence has already been referred to. Thorough planning before engaging in any TNE provision is essential for the development of successful TNE arrangements. It is important for providers to get their TNE provision right from the start, limiting the risks to incur in unforeseen problems and challenges that can not only affect the viability and quality of the partnership but also the reputation of the partners. This is also related to the need for providers to have clear strategies at institutional level for their TNE provision, ensuring that it is aligned with the broader institutional strategies, vision and mission, and related to this the need to have a central oversight for all TNE provision to ensure a strategic and coordinated approach to TNE across the institution.

A further challenge related to the need for a thorough due diligence is represented by the diversity of regulatory frameworks in different countries. It is essential when developing and running TNE to have a sound understanding of the local operating environment, and to keep abreast of regulatory changes, which might affect the sustainability or desirability of particular TNE arrangements.

In this context quality assurance agencies can play a key role in facilitating the growth of quality and relevant TNE provision and its quality assurance, by regularly sharing information about each other's developing requirements, and strengthening cooperation with a specific view to avoiding eventual regulatory gaps and unnecessary regulatory overlaps. Recent projects and international indicatives, such as QACHE, QBBG and CBQAN, point in this direction. Indeed, it is possible to observe an emerging shared view amongst quality assurance agencies. It is essential to cooperate across borders in order to fully harness the opportunities that TNE offers for meeting demands for quality and relevant higher education provision, and that agencies should act as facilitators, rather than *inhibitors*, of quality and relevant cross-border provision.

THE DEVELOPMENT OF INSTITUTIONAL AND PROFESSIONAL ACCREDITATION IN RUSSIA

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Abstract

The article outlines the recent development of higher education quality processes in Russia with a special focus on different types of accreditation. It covers the changes and development of institutional, programme and professional accreditation. Analyzing the experience of the development of the accreditation system as a social phenomenon the article focuses on specific features of institutional, programme and professional accreditation, and also outlines prospects of its development in quality assurance of higher education in Russia.

Keywords: quality assurance, institutional accreditation, professional accreditation.

Introduction

Many countries have gained enormous experience in areas relevant to accreditation, assessment and quality assurance of education in educational institutions by now. Quality assurance bodies carry on academic accreditation activities on different levels: institutional and programme accreditation as well as accreditation activities with the participation of labour market. In Russia professional accreditation is separate from institutional and programme accreditation. The goal of this paper is to differentiate types of accreditation and reveal their peculiarities in the Russian modern educational system.

Development of accreditation in Russia

By 2012 Russia had gained a 15-year experience of institutional accreditation (1997-2012). Most of HEIs in the country underwent this form of accreditation if they wanted to change their accreditation status. The Law "On Education" (1992) set a specific task of preserving the common education area in the conditions of disintegration of the Soviet system of education. There was a real danger of demarcation of the educational system within the former Soviet Union and also between the federal republics. Therefore, it was necessary to develop an evaluation technology, common for all HEIs, regardless of their form of ownership (state or private HEI), location and specialization. Inexpensive evaluation technologies were being developed taking into consideration the size of the country and limited resources (financial, in the first place, in the conditions of socio-economic crisis). They were based more on statistics, rather than on expert evaluation, which was more costly. Technical progress facilitated the development of modern information technologies, in particular, the technologies of efficient collection and analysis of data on the performance of all HEIs in Russia.

Accreditation of a HEI in the institutional form involved collecting information in all directions of its activity in a specialized format. This information was compared with the performance indicators of other HEIs and accreditation criteria. Additionally, there was an external review of the HEI: educational and research activities, teaching staff, learning resources, availability of postgraduate and further education programmes.

The standards and criteria of accreditation were set with regard to the HEI's performance as a whole: the range and scope of educational activity, qualifications of the teaching staff, scope and effectiveness of research and methodological work. Alongside the cost-efficient expert and evaluation procedures the institutional form of accreditation tackled a number of important issues: it enhanced the Rector and Rector's office responsibility for the quality and effectiveness of the HEI, it also contributed to establishing internal quality monitoring and assurance units, which resulted in the formation of an efficient governance mechanism on the national and institutional levels.

The year of 2009 faced a cardinal transformation of state accreditation procedures, which was secured by the law in 2012. An educational programme becomes the subject of accreditation, which is evaluated against the requirements of the state educational standards. Statistical and expert data are collected for every programme and include teaching staff, material and technical resources, research and methodological work, internal documentation regulating the process of the programme implementation [1]. Under the banner of quality control the state governing body increased the pressure on HEIs manifold. The number of documents necessary for state accreditation skyrocketed. The number of involved experts multiplied.

At the same time, programme accreditation has found its place and has become demanded in the procedures of professional-public accreditation. Taking into consideration that the emphasis in such a procedure is put on the employers' opinion and labour market demands, it is very important to assess graduates' learning outcomes if not in every single study programme, then at least in a field of study. Independence of professional-public accreditation from the state body of control ensures the flexibility of its content and organization of its procedures.

In programme accreditation opinions and facts about the quality of programme implementation, involvement of a wide circle of respondents and experts – students and alumni, administration and teachers, representatives of public community and employers are more important than the review of documents. The experience of professional-public accreditation of study programmes has identified an efficient and cost-effective review procedure – review of a cluster of study programmes, which is evaluation of a group of programmes carried out by one review panel comprised of representatives of academic, professional and student communities [2, 3]. Many years of experience in accreditation confirmed that institutional and programme forms do not contradict but on the contrary, co-exist and complement each other in the conditions of a large scale and diverse educational system.

Existence of various forms of accreditation in different countries of the world depends on political and economic reasons. It is generally thought that the most effective tool of education system management is a combination of institutional and programme accreditation.

At present there are no institutional forms of education quality evaluation in Russia. It would be reasonable to conduct state accreditation in an institutional form, which could make the system of education more manageable, would increase the Rector's responsibility for the quality of the HEI's activity on the whole, would restore the importance of the HEI's internal management and quality assurance systems. Programme accreditation can stay in the domain of professional-public accreditation and focus on the evaluation of education quality in a field of study. Such structure of evaluation of the quality of higher education would be more effective and plausible.

Only Russian legislation allows for a broad variety of accreditation forms: alongside the obligatory state accreditation there is also public accreditation, which can be conducted by public bodies and associations; and professional-public accreditation, which can be conducted by employers and their associations. The enactment of the Federal Law "On Education in the Russian Federation" provoked a lot of controversy, which is still going on: there have been a few deliberations in the State Duma Committee on Education, coordination of certain provisions of the law with the relevant ministries. And this is because the situation opened a Pandora's box.

Some of the unanswered questions have been already mentioned: whether the professional-public accreditation is voluntary for HEIs; whether it can be regarded as independent even if it is conducted by one of the stakeholders – the employer; whether it could become another, even a stricter controlling procedure, initiated by employers. Overdependence of evaluation on the opinion of professional associations may result in artificial constraints for admission to profession and recommendations of student drawdown, because of tough competition on the labour market and excess of supply over demand and, therefore, may cause the fall in the prestige and pay in the field.

At first sight, it stands to reason that the labour market is the major customer in the system of education. And what about those students who pay their own tuition? If the state allocates budget places for training specialists to the benefit of socio-economic and technical development of the country, it has a right to control how effectively the funds are used by means of the oversight of education quality and the supervision of compliance with the legislation. If employers or an association of employers claim the right for control and accreditation of educational programmes, then, following this logic, they should finance training of specialists in those programmes, or at least, to conduct evaluation procedures at their own expense, and also ensure employability of all the graduates of accredited programmes.

Evaluation of study programmes involves external review procedures with regard to legal persons (HEIs), and should take into consideration specific features of their activity. Implementation of professional study programmes is an integral part of the educational system as a process of education and training for the benefit of a personality, society and state. The state or a region initiate the opening of a programme, which is financed from the federal, regional, municipal or household budget. The quality of their implementation is regulated by the state through the state educational standards. Consequently, the accreditation of study programmes (whatever it is called), should not ignore the interests of the society, state and individual. Thus, it is important to keep in mind that since 2011 the higher education system has ceased being professional and on a mass scale has started to train bachelors (specialists are trained only in a limited number of programmes). There's no point in expecting from bachelors strict compliance with professional standards.

The right to conduct professional-public accreditation stipulated by the law for the sphere of education and supported by the administrative resource of the national Council for Professional Qualifications under the Government of the Russian Federation opens up broad possibilities for emergence of new structures and organizations in this field. According to the official data of the Russian monitoring system there are currently over 100 of them. However, their experience, reliability, professionalism and availability of resources give some reasons for concern. Loud name and ambitions cannot replace specific knowledge and competencies in the sphere of quality assurance.

Conclusion. Unsupported by the common sense, knowledge of the subject and expertise the attempts of creating independent voluntary accreditation would only lead to blowing up the "accreditation bubble" and discredit the very idea. The new Law "On Education in the Russian Federation" is an important step towards developing independent accreditation mechanisms; this is an opportunity and an impetus to involve academic and professional community in education quality evaluation. But in fact it could bring about negative consequences: if only employers have a right to conduct such accreditation and only for compliance with professional standards and labour market demands, then it is going to be a barrier rather than an impetus to the development. The labour market demands are dictated by the present day, and sometimes by yesterday. Higher education occupies a special place in the modern world. It should not serve economy, but create it.

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PARADIGM SHIFT IN INDIAN HIGHER EDUCATION ACCREDITATION

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Abstract

The Indian higher educational system is witnessing a paradigm shift in accreditation. The National Assessment and Accreditation Council (NAAC) has been set up to facilitate the volunteering institutions to assess their performance vis-a-vis set parameters through introspection. Over two decades of efforts of NAAC in the area of assessment and accreditation with an objective of continuous improvement of quality in education has made significant impact. Currently NAAC is in the process of complete overhaul and reform its processes. The revised accreditation framework launched in July 2017 is ICT enabled, objective, transparent, scalable and robust. This paper presents a summary of accreditation process of Indian higher education system along with salient features of the revised accreditation framework of NAAC, which was launched in July 2017. This framework is followed not only by the Indian higher education community but also by quality assurance agencies outside the country due to various innovations and reforms brought in the accreditation process. The revised accreditation framework marks a paradigm shift which has introduced several concepts in quality assurance such as Student Satisfaction Survey (SSS), Data Validation and Verification (DVV), Quality benchmarking, Innovation Ecosystem, Alumni Engagement, Institutional Values and Distinctiveness in the accreditation process. The paper concludes by suggesting that the revised accreditation framework is a step in the right direction which is likely to usher in a new era of digital accreditation with quality indicators as a base for benchmarking-led quality improvement process in Indian higher education. The analysis of initial results indicates that reforms are achieving its main goals including improvement of objectivity, increased transparency, boost in data management and use of ICT for quality enhancement process.

Keywords: *Higher Education; Quality Assurance; Revised Accreditation Framework (RAF); Higher Education Institutions (HEIs); Assessment and Accreditation (A&A); Quality Indicator Framework (QIF); Student Satisfaction Survey (SSS); Data Validation and Verification (DVV); Quality benchmarking; Innovation ecosystem; Alumni engagement; Qualitative Metrics (Q_lM); Quantitative Metrics (Q_nM); Key indicators; System Generated Scores (SGS).*

Introduction

Quality education is vital for the social and economic development of any nation and thus it assumes even greater importance for humanity. Higher education is a key driver of emerging knowledge economies like India.

Accreditation is important because: 1. the institution knows its strengths, weaknesses, and opportunities through an informed review process, 2. the identification of internal areas of planning and resource allocation collegiality on the campus, 3. funding agencies look for objective data for performance funding, 4. The institution initiates innovative and modern methods of pedagogy. 5. A new sense of direction and identity for the institution, 6. Provides society with reliable information on the quality education offered. 7. Provides employers reliable information on the quality of education offered to the prospective recruits and 8. Intra and inter-institutional interactions. (NAAC, 2018)

NAAC is exploring the prospects of bringing excellence in Indian education system through innovations in accreditation. Assessment and Accreditation (A&A) by NAAC has become mandatory for all Higher Education Institutions (HEIs). This article is a determined effort to understand and analyze the revised accreditation process and its implication in making Indian higher education system a world class higher education system.

In India, the mission and goal of providing education to increasing numbers of the population has become a priority because growth and expansion in Indian higher education have been exponential in the last few decades. The revised accreditation framework launched by NAAC as described in this paper signifies a massive paradigm shift in approach towards quality assurance in higher education.

Indian Higher Education Scenario

Recently the development of higher education in India has been remarkable. The number of HEIs and enrolment capacity has posed a greater challenge to the nation in maintaining better quality of education in the country.

The Indian higher education system is facing an unprecedented transformation in the coming decade. This transformation is being driven by economic and demographic change: by 2020, India will be the world's third largest economy, with a correspondingly rapid growth in the size of its middle classes. Currently, over 50% of India's population is under 25 years old; by 2020 India will outpace China as the country with the largest tertiary-age population. (British Council 2014)

According to AISHE report 2017-18 there are 903 Universities, 39,050 Colleges and 10,011 Stand alone institutions in India. Total enrollment in higher education has been estimated to be 36.6 million with 19.2 million boys and 17.9 million girls in the same period with this, Gross Enrolment Ratio (GER) of the students has gone up to 25.8% in 2017-18. (AISHE, 2017-18). GER is far behind countries like China which has a GER of 43.39%, in Canada 88%, USA 80.9%, Australia 79.8%, UK 52 %, and France 50%. (Singh & Ahmad, 2011). There are 12, 84, 755 teachers are working in all over India. Only 3.6% colleges run PhD programme and 36.7% colleges run PG level programmes across India. 34,400 students were awarded Ph.D. level degree during 2017.

By 2030, India will be amongst the youngest nations 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.

NAAC: Two Decades of Pioneering Experience

The National Assessment and Accreditation Council (NAAC) is an autonomous body which was set up in 1994 by the University Grants Commission (UGC) to address the issues of quality, i.e. to assess and accredit the HEIs in the country. The experience of NAAC in the area of A&A with an objective of continuous improvement of quality in education has made a significant impact.

In over two decades of its existence, the NAAC has continuously strived to improve its methodology for assessment and accreditation, taking into cognisance changing trends in higher education, the rapidly transforming global scenario, feedback from the stakeholders and lessons learnt from experiences.

The fundamental objective of NAAC's assessment is to improve the quality of HEIs in the country. In order to set the assessing parameters, NAAC has organised various brainstorming sessions with experts of higher education to design the methodology. To create awareness about assessment and accreditation, it has also organised several seminars and programmes. The UGC vide its Mandatory A&A of Higher Education Institutions Regulations, 2012, dated 19 January 2013, has made accreditation mandatory for all higher educational institutions.

NAAC has accredited 11,616 colleges and 554 universities as of 26th September 2018. This includes 3,321 colleges and 159 universities for Cycle II and 737 colleges and 66 universities for Cycle III and 11 colleges for Cycle IV, respectively (NAAC, 2018). Over 1600 HEIs accredited during the year 2016-2017. Currently, the NAAC is in the process of a complete overhaul and reform of its processes.

During the past 20 years, the NAAC has made a niche in the higher education scenario of India. Changes and trends in education are long-term phenomena, which must be considered in their historical context.

In its journey of two decades, the substantial positive impact of NAAC on the higher education sector in India is noticeable. Some of them are:

- Institutionalisation of the concept of self-evaluation and peer evaluation.
- Facilitating quality and excellence by establishing Internal Quality Assurance Cells (IQACs) and good practices - 7000 IQACs, series of good practices and quality initiatives.
- Continuous quality enhancement and quality culture through IQACs.
- Formalisation of quality assurance mechanisms.
- State government's use of the outcomes as inputs for planning state-wise analysis.
- Many policymakers have used the accreditation results for funding and for other decisions – UGC, MHRD, National Council of Teacher Education (NCTE), Dental Council of India (DCI), State governments.
- Triggered several quality initiatives – Total Quality Management (TQM) Karnataka and Andhra Pradesh.
- Nationally acceptable quality criteria evolved and applied in a complex and diverse higher education system.
- 12,170 HEIs came forward for quality assurance, pitching NAAC as the only External Quality Assurance Agency (EQAA) to undertake such massive work. Despite the fact that accreditation is voluntary, institutions have moved to the second and third cycles of NAAC accreditation.
- Capacity Building - Created a pool of about 2000 trained quality assurance professionals.
- New concepts of benchmarking, internal quality assurance cells, best practices, student participation in quality enhancement etc., introduced and popularised among HEIs.
- Triggered Research and Development activities and collaborations. (Self-review document of NAAC, 2013)
- NAAC is its partnership with stakeholders for pro-active measures to promote A&A in the country. So far, the NAAC has reached almost all states for A&A processes, including remote areas.

External Quality Assurance Initiatives in India

Indian higher education system is well-known, globally, for some of its premier institutions such as the Indian Institutes of Technology (IITs), Indian Institutes of Management (IIMs), Indian Institute of Science (IISc) and Indian Institutes of Information Technology (IIITs). The National Policy on Education (1986) laid special emphasis on advocating the importance of quality of higher education in India and strengthening the quality initiatives with the establishment of accreditation agencies in India. Presently there are three accreditation agencies functioning in India: the National Assessment and Accreditation Council (NAAC) set up by the University Grants Commission (UGC) in 1994 to monitor the quality of HEIs in general education, the National Board of Accreditation (NBA) by the All India Council for Technical Education (AICTE) for technical education, and the Accreditation Board (AB) of the Indian Council for Agricultural Research (ICAR) for accrediting agricultural institutions. The NAAC is considered as a major quality assurance agency in India as it covers all categories of HEIs (Patil and Pillai, 2016).

NAAC's International Alignment and Recognition

The NAAC and its faculty are engaged in many institutional and individual projects. The projects with European Commission, United Nations Educational, Scientific and Cultural Organization (UNESCO), International Network for Quality Assurance Agencies in Higher Education (INQAAHE), Asia Pacific Quality Network (APQN), Commonwealth of Learning (COL), Ministry of Human Resources Development (MHRD), University Grants Commission (UGC) etc. have resulted in several publications and reports.

The NAAC's international recognition is underscored by key facts given below:

- Accreditation by NAAC is recognised globally for admissions, placements and collaborations [Most universities in the USA recognise the NAAC's highest grade 3-year HEI degrees as equivalent to the 4-year US degree for higher studies].
- The NAAC is a full member and founder of several international and regional networks namely, INQAAHE and APQN.
- Training and expertise of the NAAC is extended to Quality Assurance Agencies in the Asia Pacific region.
- The NAAC facilitated the establishment of Quality Assurance Agencies in the Asia Pacific Region (Cambodia, Nepal, Mauritius, etc.)
- Joint projects/Publications with UNESCO, COL and APQN etc.
- Leadership in governing bodies of global quality networks (APQN, INQAAHE, Asia Pacific Quality Register-APQR)
- NAAC faculty have participated as international assessors for evaluating overseas HEIs.
- NAAC and its faculty have received international recognition and awards for contributions to quality assurance (APQN Quality Award, Endeavour Australia Awards, UNESCO/COL partnerships).
- Global Partnership with UNESCO, COL, European Commission and Council for Higher Education Accreditation (CHEA), USA.
- The NAAC has signed Memorandums of Understanding (MoUs) with Council of Higher Education, USA (CHEA), Tertiary Education Commission, Mauritius (TEC), Higher Education Evaluation and Accreditation Council of Taiwan (HEEACT), National Authority for Qualifications & Quality Assurance of Education & Training, Bahrain (QQA) and Knowledge and Human Development Authority, UAE (KHDA) etc.,
- The Global Summit organised by NAAC on 16-17 September 2016 witnessed the participation of prominent global leaders in quality assurance representing apex bodies from Asia, America, Europe, the Arab region and Africa.

- Bengaluru Statement 2016 on Next-Generation Quality Assurance of Higher Education: A Shared Vision and Commitment for Fostering Partnership Beyond Borders", which was the culmination of the global summit organised by NAAC and APQN will be counted as the major landmark in the International history of higher education quality assurance.
- International recognition and awards including 'APQN Quality Award 2017' for International co-operation in Quality Assurance.
- India-EU Higher Education Benchmarking Project sanctioned by European Commission commencing from December 2017.

Value framework for Assessment of HEIs

The development of a multifunctional quality framework to meet the divergent needs of stakeholders in education is, no doubt, a challenging task. The traditional framework for quality assurance focuses more on inputs and processes and less on outcomes. There is an increasing realization of the necessity to focus more on outcomes of higher education (Prasad VS, 2005).

The five values or parameters of assessment of HEIs, i.e., (1) Contribution to National Development, (2) Fostering Global Competencies among Students, (3) Inculcating a Value System in Students, (4) Promoting the Use of Technology and (5) Quest for Excellence, it is hoped, will help us to develop a critical understanding of the contributions of institutions of higher education to society and individuals. The framework, in spite of its generality, provides a broad vision of higher education in developing countries.

Revised Accreditation Framework (RAF) of NAAC

As has been mentioned earlier, the NAAC has continuously strived to improve its methodology for assessment and accreditation, taking into cognisance changing trends in higher education, the rapidly transforming global scenario, feedback from the stakeholders and lessons learnt from experiences. Currently, NAAC is in the process of a complete overhaul and reform of its processes.

The revised accreditation framework launched in July 2017 is Information and Communications technology (ICT) enabled, objective, transparent, scalable and robust.

Highlights of RAF

- Combining Letter of Intent (LOI) and Institutional Eligibility for Quality Assessment (IEQA) formats designed and deployment as a single application called the Institutional Information for Quality Assessment (IIQA) has reduced the cycle time for accreditations.
- Existing fifty (50) Core and Desirable Indicators, about Two hundred (200) Assessment Indicators and questions in manual synthesized.
- Shift from qualitative peer judgements to quantitative indicator evaluation.
- Extensive use of ICT has enhanced scalability and robustness.
- Simplification of process has led to drastic reduction in number of questions, indicators, size of report, visit days, etc.
- Quality Indicator framework to boost benchmarking as a quality improvement tool.
- A new concept of validation of data by external agency.
- Online Student Satisfaction Survey.
- System Generated Scores (SGS) in combination with online evaluation (70%) and peer judgment (30%).
- Existing NAAC indicators compared with indicators developed for National Institutional Ranking Framework (NIRF) and other international QA frameworks. A comparable set of indicators across Universities and Colleges prepared for NAAC assessment.

- The CVs of the assessors (peer team members) will be placed in the public domain.
- Cut-off scores designed as pre-qualifiers for Accreditation and Grade qualifiers.
- The CGPA and Grades of the institutions are automated, and system-generated, based on the evaluation outcome of the 70% - 30% offsite – onsite assessments respectively.
- Penalty provisions will be evoked for institutions submitting fraudulent data/information/supporting documents.
- Consulted about 200 experts through national meet, workshops and Core Working Group and Sectoral Working Groups meetings.
- Conducted a pilot study across the country to test the framework and benchmarks (100 HEIs).
- Quality Indicator Framework (QIF) hosted on website and feedback sought.
- Provision of 5% optional/non applicable metrics to address diversity issue.

Quality Indicator Framework (QIF)

The QIF forms the backbone of the revised A&A process of NAAC. The seven criteria of the framework represent the core functions and activities of an HEI. In the revised framework not only the academic and administrative aspects of institutional functioning but also the emerging issues have been included. The seven criteria which serve as the basis for assessment of HEIs are given in Table 1.

Under each criterion, a few 'Key Indicators' are identified. These Key Indicators (KIs) are further delineated as 'Metrics' which elicit responses from the HEIs. These seven criteria along with their KIs explicate the aspects they represent.

Developing the Quality Indicator Framework

A series of consultations, meetings and a national workshop in February 2017 were organised to develop the QIF. A feedback collection from various stakeholders through survey was done. Core Working Group (CWG) and Sectoral Working Groups (SWGs) were set up for Universities, Autonomous Colleges and Affiliated / Constituent Colleges to evolve the QIF and a series of CWG and SWG meetings were held. A pilot study was conducted to test the QIF involving about 100 HEIs across the country to calibrate QIF benchmarks. Finally, a national consultation was organised at New Delhi in April 2017 to fine-tune and finalise the revised accreditation framework.

Key Features of the QIF

- Qualitative and Quantitative Metrics proposed under each key indicator with pre-determined weights.
- Each Metric is provided with a benchmark range on a 5-point scale (very high to very low) or binary scale (Yes/No).
- The calculation method remains the same as per the current grading pattern except in case of binary scale indicators where 'Yes' results into highest value,4, and 'No' results into lowest value,0.
- Indicators are expected to be supported by a data sheet providing evidence for the quantitative response submitted by HEIs.
- To assess subjective elements such as teaching-learning process, student services, etc., a new component of online student satisfaction survey is introduced.
- The draft set of indicators is pilot-tested on select HEIs.
- Based on the analysis of pilot tests further, fine-tuning of benchmarks is done.
- The number of criteria, i.e. seven, remains the same for the new QIF; only the name of Criteria III and VII has been changed, i.e. Criterion III has been renamed as 'Research, Innovations and Extension' and Criterion VII will be called as 'Institutional Values and Best practices'.

- Introduction of new Key Indicators such as Student Satisfaction Survey, Alumni Engagement, Innovation ecosystem, Institutional values and social responsibilities, and Institutional Distinctiveness.
- The total weight of the A&A process remains the same, i.e. 1000 points. The criterion-wise weight of all the seven criteria also remains the same.
- The Key Aspects will now be known as Key Indicators, and the measures/questionnaire under Key Indicator will be called as Metrics. The same has been drastically reduced from 220 to around 130.
- Pre-Qualifiers for Peer Team Visit have been pioneered.

Student Satisfaction Survey

As part of QIF, the NAAC has endeavoured to conduct a Student Experience Survey, the results of which will be included in the accreditation process. The students will remain anonymous throughout the process. The institution is supposed to send a list of total student strength, with details of their student identity (ID) number, Aadhaar ID number (any other valid ID number in the absence of Aadhaar), degree programme student is enrolled in, email id and mobile number. The NAAC will send an online link of this 'Student survey' to the email address/mobile number of the student and the student will have to fill the survey before a stipulated date. The questionnaire consists of several facets of the teaching-learning process. (Metric No. 2.7.1) Analysis of the student survey will be done using a customised software which will aggregate the responses and generate the score.

Alumni Engagement

Alumni have a vital role to play in the quality improvement of the alma mater. The key indicator 'Alumni Engagement' emphasises on the association of alumni with the institution for academic and other financial matters. Various contributions of alumni are covered in this key indicator such as financial assistance in the form of gifts or donations to the institution which help significantly in the development of the institution.
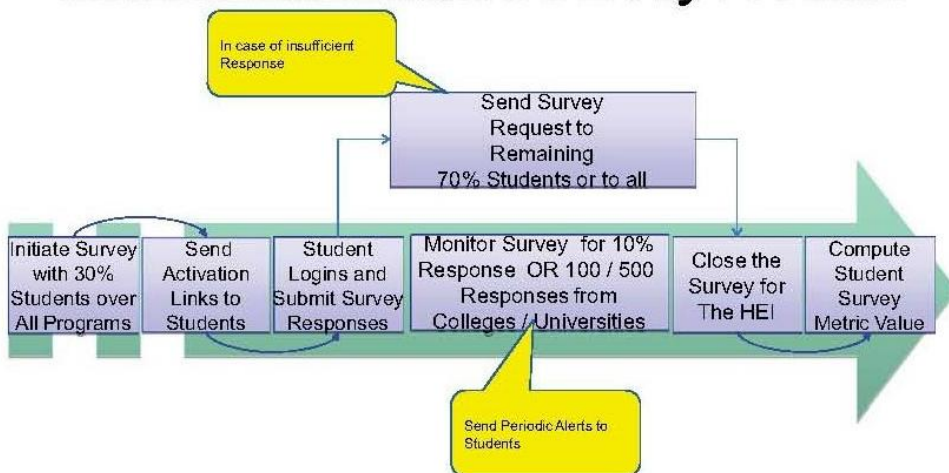

Figure 1. RAF – Student Satisfaction Survey process of NAAC

Innovation Ecosystem

Innovation Ecosystem is an important key indicator in improving the quality of an institution, which describes the innovative and pioneering practices. This key indicator addresses innovative initiatives of the institution, i.e. incubation centre, workshops/seminars on Intellectual Property Rights (IPR), industry-academia innovative practices, innovation awards and encouragement of start-ups in the campus etc.

Institutional Values and Social Responsibilities

The emphasis on value and ethics in an institution's accreditation is significant as highlighted by Jain and Singh (2016) below:

The inclusion of "Values and Ethical Practices", as an independent parameter of quality assurance for assessment/accreditation of HEIs, will provide a strong momentum to quality initiatives and good governance. Our regulatory bodies and networks will have to adopt a much broader role in sharing their wisdom and practices for evolving value-based ethical practices for quality assurance.

In the revised accreditation framework, the key indicator, Institutional Values and Social Responsibilities, focuses on the institution's responsibilities towards public and social issues. The key indicator highlights the social issues and concerns such as gender equity, attitude towards the differently abled, inclusion and situatedness, human values and professional ethics. It also covers issues related to the environment.

Institutional Distinctiveness

The key indicator, Institutional Distinctiveness, refers to the differentness of an institution from other institutions. An institution is characterised by its reason for its existence, vision, mission, nature of stakeholders, access to resources, cultural ambience and physical location etc. An established institution will be recognised for its certain and distinct attributes which make it different from others with regard to its characterisation which will be reflected in its activities.

Data Validation and Verification (DVV) and Pre-qualifier Score

At the second level, data /information submitted in the SSR will be subjected to an online assessment mechanism/process with the DVV process after an online evaluation generating a pre-qualifier score. Institutions securing 30% on the quantitative metrics will qualify for onsite peer review/ assessment. The pre-qualifier scores are exclusive of the SSS.

Table 1. Components of Quality Indicator Framework: Criteria, Key Indicators and Metrics

Criteria	Key Indicators	Universities	Autonomous Colleges	Affiliated Colleges
1.Curricular Aspects	1.1 *(U)Curriculum Design and Development	50	50	NA
	1.1.*(A)Curricular Planning and Implementation	NA	NA	20
	1.2 Academic Flexibility	50	40	30
	1.3 Curriculum Enrichment	30	40	30
	1.4 Feedback System	20	20	20
	Total	**150**	**150**	**100**
2.Teaching- Learning and Evaluation	2.1 Student Enrolment and Profile	10	20	30
	2.2 Catering to Student Diversity	20	30	50
	2.3 Teaching-Learning Process	20	50	50
	2.4 Teacher Profile and Quality	50	60	80
	2.5 Evaluation Process and Reforms	40	40	50
	2.6 Student Performance and Learning Outcomes	30	50	40
	2.7 Student Satisfaction Survey	30	50	50
	Total	**200**	**300**	**350**

3. Research, Innovations and Extension	3.1 Promotion of Research and Facilities	20	20	NA
	3.2 Resource Mobilisation for Research	20	10	10
	3.3 Innovation Ecosystem	30	20	10
	3.4 Research Publications and Awards	100	20	20
	3.5 Consultancy	20	10	NA
	3.6 Extension Activities	40	50	60
	3.7 Collaboration	20	20	20
	Total	**250**	**150**	**120**
4. Infrastructure and Learning Resources	4.1 Physical Facilities	30	30	30
	4.2 Library as a Learning Resource	20	20	20
	4.3 IT Infrastructure	30	30	30
	4.4 Maintenance of Campus Infrastructure	20	20	20
	Total	**100**	**100**	**100**
5. Student Support and Progression	5.1 Student Support	30	30	50
	5.2 Student Progression	40	30	45
	5.3 Student Participation and Activities	20	30	25
	5.4 Alumni Engagement	10	10	10
	Total	**100**	**100**	**130**
6. Governance, Leadership and Management	6.1 Institutional Vision and Leadership	10	10	10
	6.2 StrategyDevelopment and Deployment	10	10	10
	6.3 Faculty Empowerment Strategies	30	30	30
	6.4Financial Management and Resource Mobilisation	20	20	20
	6.5 Internal Quality Assurance System	30	30	30
	Total	**100**	**100**	**100**
7. Institutional Values and Best Practices	7.1 Institutional Values and Social Responsibilities	50	50	50
	7.2 Best Practices	30	30	30
	7.3 Institutional Distinctiveness	20	20	20
	Total	**100**	**100**	**100**
	TOTAL SCORE	**1000**	**1000**	**1000**
*(U) - applicable only for Universities and Autonomous Colleges; (A) –applicable only for the Affiliated/Constituent Colleges. Each key indicator consists of Qualitative Metrics (Q_lM) and Quantitative Metrics (Q_nM)				

Revised Grading System.

The revised framework will be more ICT-intensive and 'outcome-based'. The details of grading pattern of NAAC (A++, A+, A, B++, B+, B, C, D) are presented in Table 2:

Table 2. The Revised Grading System

CGPA	Letter Grade	Status
3.51 – 4.00	A++	Accredited
3.26 – 3.50	A+	Accredited
3.01 – 3.25	A	Accredited
2.76 – 3.00	B++	Accredited
2.51 – 2.75	B+	Accredited
2.01 – 2.50	B	Accredited
1.51 – 2.00	C	Accredited
≤ 1.50	D	Not Accredited

NAAC Accreditation Outcome Document

The NAAC Accreditation Outcome Document has three parts:

Part I: Peer Team Report

- Section 1: Gives the general information of the institution and its context.
- Section 2: Criterion-wise Analysis based on peer evaluation of qualitative indicators. This will be a qualitative analysis of descriptive nature aimed at critical analysis, presenting the strengths and weakness of the HEI under each criterion.
- Section 3: Overall Analysis, which includes institutional strengths, weaknesses, opportunities and challenges.
- Section 4: For recording 'Recommendations for Quality Enhancement of the Institution' (limited to ten major recommendations).

Part II: Graphical representation based on Quantitative Metrics (Q_nM)

This part will be a system-generated quality profile of the Higher Education Institution (HEI) under consideration, based on statistical analysis of quantitative indicators as evaluated by NAAC's quality indicator framework. A quality radar and graphical presentation of institutional features would be reflected in this part of the document through the synthesis of quantifiable indicators.

Part III: Institutional Grade Sheet

The third part of the accreditation document consists of the institutional grade sheet which is based on qualitative indicators, quantitative indicators and student satisfaction survey using existing calculations methods. However, this grade sheet is generated by software employed by the NAAC without any human intervention in its creation.

The abovementioned three parts would be combined to form the '*NAAC Accreditation Outcome*' document. It would be made mandatory for HEIs to display the document on the institutional website apart from hosting it on the NAAC website.
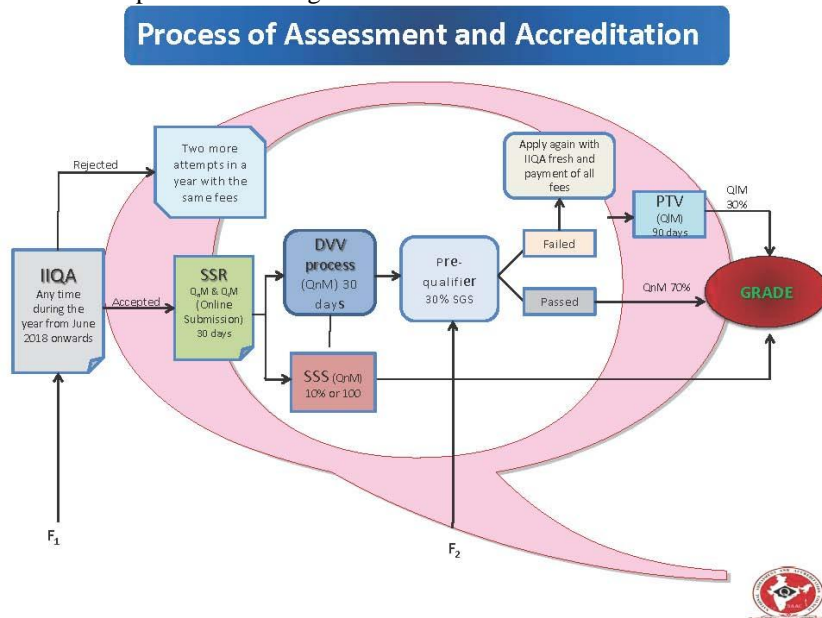

Figure 2. Chart of Revised A&A Process of NAAC

Table 3. Comparative Statement of Current and Revised Accreditation Framework of NAAC

Sl. No	Current Process	Revised Process
1	Accreditation Process is outcome-based on peer judgment	Data-based quantitative indicator evaluation with combination of peer judgment
2	Elaborate process of self and external evaluation covering seven criteria, 36 key aspects, 200 indicators and about 300 questions	Significant reduction in self/external evaluation covering seven criteria, 34 key indicators and about 130 metrics
3	No pre-qualifier for Peer Team Visit: Visit takes place for all HEIs after SSR submission	Pre-qualifier for Peer Team Visit: Institution needs to score at least 30% of the quantitative (system generated) score.
4	Interaction with students - onsite	Online student satisfaction survey
5	Onsite data verification by academic peers	Data verification and validation by external agency
6	Manual selection of peer team	System-enabled selection of peer teams for onsite visit
7	Logistics arrangement made by the institutions themselves (Team constitution known quite earlier)	Integration of logistics through external agency. Total confidentiality till visit date.

NAAC reforms: Impacts and Expected outcomes

Expected outcomes and impact of NAAC's reforms are summarised as below:

- Reducing the subjectivity due to variance in peer team assessment.
- Inculcation of competitive spirit by providing Quantitative benchmarks as basis of assessment.
- Improvement of data management practices in HEIs.
- Increased use of ICT in Teaching, Learning and Governance for quality improvement.
- Integrating the stakeholders involvement and feedback in quality improvement. (Key Indicators like Feedback System, Student Satisfaction Survey, Alumni Engagement)
- Introduction and acceleration of Outcome Based Education (OBE).
- Encouraging the culture of innovation and start-up on campuses.
- Reinforcement of value and ethics (Criteria VII on Institutional Values and Best practices).
- Institutionalisation of quality culture (IQAC, etc)
- Promoting gender sensitivity on the campus.
- Incentivising the inclusive practices such as reservation policy, differently abled (Divyangjan) friendly campus, etc)
- Encouraging students to participate in extension activities such as Swatch Bharat, Aids Awareness, Gender Issues, etc.,
- Promoting e-resources of library for easy access to students.
- Focus on research in Universities (metrics on Patents, Citations, h-index, etc.,)
- Emphasis on skills and co-relation of academics with word of work.
- Attempt to reach the golden mean of advantages of Rankings and Quality assurance process.
- Introducing new concept of Third party validation of Data by external agencies.
- Encouraging mobility of students and teachers.
- Recognising diversity (Optional Metrics).
- Relevance of curriculum with societal needs and global trends.
- Faculty empowerment (FDP, seed money, awards, etc.,)
- Encouraging eco-friendly practices on campus.

RAF - Feedback & Issues:

On developing the revised accreditation framework, the NAAC has received feedback from the stakeholders. Some of the principal concerns of the stakeholders and responses of NAAC can be summarised as under:

- **Diversity**

A few institutions were concerned that some metrics are not applicable to them. Since a 'one size fits all model' is not feasible in a diverse higher education system, key elements needed to measure the quality of higher education are included in the QIF. A provision for distinctiveness is made and also a provision has been made so that HEIs can opt out up to 5% of metrics which are not applicable to them.

- **Faculty Shortage/Funding Issues**

Another apprehension expressed by HEIs relates to the possibility of scoring low due to reasons beyond their control such as faculty shortage/funding issues. Since the NAAC A&A is a diagnostic quality tool, these elements are essential for evaluating quality and have been incorporated.

- **Systemic Limitations**

A few of the stakeholders have reported that State government norms, affiliating university issues, implementation of Choice-Based Credit System (CBCS), student-teacher ratio, etc. may create limitations for institutions. Since A&A is not a homogenising tool, the issue of systemic limitations may have to be addressed at the policy level rather than excluding such factors from the evaluation framework.

- **Apprehensions from Already Higher-graded HEIs**

Some HEIs have expressed their concern about the data-driven quantitative process. One of the objectives of the recent reforms is to reduce subjectivity in the current process. The concern about liberal grading in some cases is expected to be neutralized with a new framework which is robust and objective.

- **Methodology-related Concerns**

Benchmark values, transparency, first-time introduction of DVV and penalties are a few of the other concerns. NAAC has made best efforts to develop a reliable methodology for addressing these concerns. The analysis of results in the initial windows would be critical to assess its usefulness and remedial measures if needed can be taken.

- **Weightages**

Another concern expressed relates to the need to further classify institutions into categories of Arts, Science and Business Management. An attempt has been made to capture the functions of undergraduate and post-graduate colleges through differential metrics and weightages (for example Research, Resource Mobilization for Research and Research Publication and Awards).

- **Geographical Location**

Institutions located in geographically disadvantaged areas have expressed reservations over the framework being urban biased. NAAC has addressed this issue by according a low weightage to the metric on student enrolment from outside the state. Further, the key indicator, Inclusion and Situatedness provides scope for highlighting institutional achievements concerning location.

- **Technology**

Quantitative measurement of quality may have limitations, which is why NAAC attempts to make a judicious blend of Qualitative Metrics (Q_lM) and Quantitative Metrics (Q_nM). Metrics related to use of ICT, e-resources etc. are deemed essential in the context of national initiatives like Digital India, SWAYAM and National data repository etc. Availability of ICT facilities (classrooms with ICT facilities) is to be evaluated vis-à-vis its usage. Fourth cycle e-assessment will be taken up based on the feedback of accreditation in the first two windows.

RAF – Challenges and Way Forward:

While implementing the RAF, NAAC has faced several challenges during the fine-tuning process which are discussed and addressed below:

- **Resistance for change from stakeholders to complete transition to ICT based data driven model**

NAAC has received feedback and concerns regarding the transition from peer review to ICT based data driven model from HEIs located in rural, hilly areas. The competent authorities are planning to set up Educational Media Centre to reach out all unreached areas. This centre will hold series of interactive sessions with HEIs and Assessors for the purpose of accreditation capacity building and training of assessors using digital communication technology.

Need for considering feedback from the field and fine-tuning the framework

Based on the feedback received from the Stakeholders/field, NAAC has taken up an exercise to revise and fine tune the framework. Present model/methodology which is used in the field is fine tuned and tested. In near future the same framework will be re-revised and field tested based on the needs of the stakeholders.

- **Suitability of framework for specialised HEIs (Sanskrit / Yoga, etc)**

In order to deal with mono faculty/specialised programme institutions, NAAC has engaged in structuring the accreditation frame work for institutions offering specialised programs such as Sanskrit, Yoga, dance, music. Presently NAAC has taken up development of assessment manuals for Yoga and Sanskrit programme / HEIs.

- **Concerns/litigations due to linking of CGPA with grants/recognition/status**

There is a field reaction on tough results with down-grading compared to previous cycle assessment and there is also a concern regarding the linkage of NAAC results with grants from UGC, MHRD-RUSA, etc. The institution graded with better grades may get better funds but it affects the poor performing institutions, as these are already disadvantaged. This has increased number of appeals and may invite a few litigations.

Conclusion

This study shows that in 25 years of its existence the NAAC has earned substantial goodwill and appreciation from the academic community. Simultaneously, it also suggests a need for incessant effort to strengthen and fine-tune its &A&A processes and procedures.

After two decades of groundbreaking and pioneering work in establishing an external quality assurance system of higher education in India, at this juncture, the NAAC is remodelling its approach and methodology in consonance with the requirements of a digital era.

The revised accreditation framework marks a paradigm shift which has introduced several concepts in quality assurance such as Student Satisfaction Survey (SSS), Data Validation and Verification (DVV), Quality benchmarking, Innovation Ecosystem, Alumni Engagement, Institutional Values and Distinctiveness in the accreditation process. These concepts and procedures have to be understood by the stakeholders. NAAC also needs to design a strategy to take the revised accreditation framework ahead by reaching out to the stakeholders, who are having apprehensions about new form of accreditation, which is data driven.

An early results of RAF indicates that NAAC and India is ready to usher in a new era of digital accreditation with quality indicators as a base for benchmarking-led quality improvement process.

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QUALITY ASSURANCE OF POSTGRADUATE EDUCATION BASED ON THE THIRD PARTY SAMPLING INSPECTION OF THESES IN SHANGHAI

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Abstract

Theses are an important basis for postgraduate students to apply for a degree, and direct reflection about the quality of postgraduate education. The third party sampling inspection is one of the measures to ensure the quality of postgraduate education. According to the Shanghai sampling inspection principles of master's theses, the Shanghai Education Evaluation Institute (SEEI) has set the sampling rules and developed the evaluation index system. The inspection process can be tracked and the results can be analyzed relying on the Shanghai degree and postgraduate education information platform. The informatization of theses sampling inspection improves the efficiency of theses evaluation, promotes the scientificity and fairness of theses evaluation, and ensures the quality of postgraduate education.

Keywords: *Theses, sampling inspection, informatization, quality assurance*

Introduction

As the enrollment and training scale of Chinese postgraduate students continues expanding, the quality of postgraduate education has aroused more and more attention. It is an important task to ensure and continuously improve the quality of postgraduate education [1]. In China, theses are not only an important basis for postgraduate students to apply for a degree, but also direct reflection about the quality of postgraduate education. Theses are a final result of postgraduate training and can be used to evaluate the quality of postgraduate education [2]. In order to ensure the quality of postgraduate education, China started the sampling inspection of doctoral and master's theses after their graduation since 2014. According to the "Sampling Inspection Principles of Doctoral and Master's Theses" issued by the Ministry of Education of the People's Republic of China and the Academic Degrees Committee of the State Council (No. [2014] 5) and "Notice on Completing Sampling Inspection of Master's Theses" issued by the Education Steering Committee Office of the State Council (No. [2014]30), the sampling inspection of doctoral theses is organized by the Academic Degrees Committee Office of the

State Council, and the sampling inspection of master's theses is organized by provincial academic degree committees. In November 2014, the Shanghai Academic Degrees Committee and the Shanghai Education Committee jointly issued the "Shanghai Sampling Inspection Principles of Master's Theses ([2014] No. 9)", and the Shanghai Academic Degrees Committee Office issued the "Notice on Completing Sampling Inspection of Master's Theses in 2014 ([2014] No. 16)", leading to the launch of master's theses sampling inspection in Shanghai. Based on the national policy and local situation, Shanghai carried out the sampling inspection of master's theses. Entrusted by the Shanghai Academic Degree Committee Office, SEEI successively implemented the sampling inspection of graduated master's theses to supervise the quality of the master degree' awarding in Shanghai.

Determination of sampling principles

According to the "Shanghai Sampling Inspection Principles of Master's Theses", sampling inspection of master's theses in Shanghai is conducted through general sampling and emphasis sampling. The general sampling refers to each discipline using random sampling with sampling ratio about 5%. For disciplines with few degrees awarded, at least one master's degree thesis shall be assessed for three consecutive years [2]. The emphasis sampling enhances the sampling ratio and inspection effort, mainly focusing on the institutions, disciplines and supervisors where quality problems are prone to or already emerged. The emphasis sampling with sampling ratio up to 10% mainly focused on the following cases: new enrollments since the first degree awarded within three years, enrollments emerged questions within three years, supervisors guiding four or more postgraduate students obtaining master's degree at the same year, on-job candidates obtaining a master's degree, candidates with the postponement of more than one year, international students and other cases that need attention. 100% sampling inspection for master's theses is applied to supervisors whose doctoral student' thesis has been identified as "unqualified thesis" during national doctoral theses sampling inspection within three years. Master's theses applying for confidentiality are 100% sampling inspected after declassification.

Development of evaluation standards

In China, master degree is divided into two types, academic and professional. The training objectives and theses requirements are different for the two different types of master degree. Entrusted by the Shanghai Academic Degree Committee Office, SEEI organized evaluation experts analyzing the "Basic Requirements for PhDs and Master Degrees" issued by the Academic Degrees Office of the State Council and the "Basic Requirements and Evaluation Index System for Master Degree Theses in Shanghai". After careful discussion and repeated argument, the evaluation index system of the theses sampling inspection was carried out with the document of "Evaluation Elements for Sampling Inspection of Master Theses in Shanghai" for Natural Science Academic Degrees, Humanities and Social Sciences Academic Degrees, Natural Science Professional Degrees, Humanities and Social Sciences Professional Degrees, respectively.

Table 1. Evaluation Elements for Sampling Inspection of Master's Theses in Shanghai
(For Natural Sciences Academic Degrees)

Evaluation index	Evaluation elements
Topics and reviews	The theoretical significance and practical value of the research; the degree of understanding the development status and academic developments in the discipline and related disciplines at home and abroad.
Innovation and thesis value	The value of new ideas and methods; the impact or effect of the results on technological progress, economic construction, national security and so on.
Scientific research ability and basic knowledge	The solidity of theoretical foundation embodied in the theses; the systemic character of the specialized knowledge in the subject and related disciplines; the ability to analyze and solve problems; the scientificity of the research methods and application of advanced technologies, equipment and information for the research.
Essay norms	The norms of citation, the preciseness of study; the accuracy of the language, the rigor of logic, the format of writing and charts.

Table 1 shows the evaluation index system of Natural Science Academic Degrees. The evaluation is mainly based on the four indexes including the topics and reviews, innovation and thesis value, scientific research ability and basic knowledge, essay norms.

Tracking of sampling inspection process

In 2013, the Shanghai Academic Degrees Committee Office started the construction of degree and postgraduate education information platform, where the quality evaluation of theses is one of the most important modules. To ensure the quality of sampling inspection work for master's theses in Shanghai, the supervisors (experts) database, degree grant information database, doctoral and master's theses database are developed.

The sampling inspection of master theses in Shanghai includes: theses sampling, matching and delivering to experts, expert evaluating, determining the theses need to review, experts reviewing theses and summary of the evaluation results. The process of the theses sampling follows: firstly, the project manager randomly selects the theses according to certain rules; secondly, the theses to be evaluated are imported into the system; finally, the system matches the theses with experts according to the theses' titles and keywords and the experts' specialty and research directions, then the theses are automatically sent to relevant experts. After starting the evaluation, the following situations may occur: some theses are distributed to 3 experts by the system along with alarming messages at the same time, reminding the experts to reply within 48 hours. If all 3 experts agree to evaluate,10 days will be left for experts to submit their evaluation results; if less than 3 experts reply, the system will re-distribute the theses to other qualified experts; some theses are assigned to less than 3 experts when automatic matching cannot be completed, then manual matching session is introduced. The project manager checks the assignment daily, masters the progress of the assignment, and keeps aware of the distributive problems and resolves them promptly.

Identification of sampling results

The rules for identification of the sampling inspection results are as follows:

(1) If all three experts judge it as qualified, the thesis is thereby qualified;

(2) If two or more experts judge it as unqualified, the thesis is thereby unqualified;

(3) If one expert judges it as unqualified, then two more experts are distributed to review the thesis. For the two reassignment experts, as long as one expert judges it as unqualified, the thesis is thereby unqualified; if two experts judge it as qualified, the thesis is thereby qualified.

Table 2 shows the results of sampling inspection for the past three years. The sampling ratio was beyond 5%, and there were unqualified theses every year.

Table 2. Results of sampling inspection for the past three year

Graduation time	2013.9.1~2014.8.31	2014.9.1~2015.8.31	2015.9.1~2016.8.31	Total
Number of Graduation masters	39768	42843	42337	12498
Number of theses for Sampling	2007	2328	2125	6460
Sampling ratio (%)	5.05	5.43	5.02	5.17
Number of disqualified theses	81	76	32	189

Use of sampling inspection results

SEEI submits the results of sampling inspection to Shanghai Academic Degrees Committee Office. The Shanghai Academic Degrees Committee Office feeds back expert comments to degree-awarded institutes and the results of sampling inspection are also submitted to the Academic Degrees Committee Office of the State Council. The Shanghai Academic Degrees Office announced the sampling inspection results of each degree-awarded institute in city-wild scope, and the announced information includes the total number of sampling, number of unqualified theses and so on. Inquiry on quality is addressed to institutes

that have unqualified theses with high ratio or numbers for consecutive two years. For the institutes with poor inspection results, the corresponding administrative procedures shall be carried out by means of follow-up sampling (such as increasing the number of sampling) and special follow-up evaluation, and corresponding warnings, if needed, shall be given according to the inspection results. In the qualification assessment of master enrollments, the sampling inspection results of master theses are an important indicator. For the master enrollments with high ratio or numbers of the unqualified theses, warning of time-limit rectification shall be given according to relevant procedures. If the institutes still cannot meet the requirements after rectification, the academic level is then regarded as disqualified enrollments, and the revocation of authorization for degree-awarded shall be executed. The degree-awarded institute shall take the expert comments on theses inspection as an important basis for the qualification evaluation of supervisor's enrollment and the allocation of postgraduate education resources.

Conclusion

Based on the informatization construction of Shanghai degree and postgraduate education, and the practice of Shanghai sampling inspection of master theses, the achievements are as follows: (1) Establishment of degree and postgraduate education information base. The theses information database and expert database have been set up, which established a resource pool of supervisors and experts covering Shanghai and even the whole nation. (2) Optimization of theses inspection procedure. Uploading theses, selecting experts, pushing inspection materials, experts online evaluating theses and submitting the assessment results can be completed through the information platform and the project manager can monitor real-time evaluation progress and analyze the sampling inspection results online. (3) Improvement of the efficiency of the theses sampling inspection. The introduction of online process reduces the manpower and time cost of sending materials between institutes, the burden of postgraduate management department, and improves the efficiency of the sampling inspection of postgraduate theses. (4) Improvement of the scientificity and fairness of the theses sampling inspection. By batch and centralized delivery to experts, the comparability and accuracy of the evaluation are enhanced; Experts directly receiving the theses through the network have no intermediate transfer, which is conducive for experts to objectively and fairly evaluate theses. In summary, delivery of theses and evaluation forms to experts through the Internet, and online submission of the evaluation results is realized. And the informatization and paperless operation of Shanghai theses sampling inspection is also realized, which promotes the scientificity and fairness of postgraduate theses evaluation, and assures the quality of Shanghai postgraduate education.

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THE UTILIZATION OF INFORMATION TECHNOLOGY IN HIGHER EDUCATION QUALITY ASSURANCE IN CHINA

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Abstract

It is an effective innovation for large scale of higher education countries to carry out quality assurance by information technologies for quality monitoring. After more than ten years of efforts, China has built the national data platform for the quality monitoring of higher education, which features a large scale, strong functions and advanced technologies. China has carried out the quality monitoring of higher education on the basis of massive data from the national data platform. The data platform plays an important role in supporting periodic evaluation, accreditation and the development of national higher education quality reports. In this paper the background, process, system design and efficiency of the national data platform will be introduced in detail.

Keywords: information technology, data platform, higher education quality monitoring.

Introduction

Today, we have already entered the information network era. Information and technology has become the basic driving force for social development. Information technology has also developed rapidly. In recent years, cloud computing, big data, artificial intelligence, virtual reality and mobile internet as the representative information new technologies emerge endlessly. In the field of education, information technology has had a great impact on traditional education. It has changed the ideas, concepts, patterns and methods of education, and that led to the great transformation. Education informatization means to effectively apply information technology in teaching and scientific research, and pay attention to the development and utilization of education information resources. Education informatization is the basic approach of education reform and innovation, and it is also the combination of education and new information technology.

The Chinese government always attaches great importance to the information work of education and actively implements policies of educational data regular release. In July 2010, the Ministry of Education issued " The Outline of China's National Plan for Medium& Long-term Education Reform and Development (2010-2020)", in which it states: Integrate education informatization into the overall strategy of national informatization development Plan, speed up the school management informatization process, and promote the standardization of school management. In October 2014, the Ministry of Education issued "Guidelines for the Construction and Application of Education Management informatization". It plans: By the year 2020, finish building of education administrative information system which covers all levels of

administrative departments and all kinds of institutions (schools). Make sure the education information technology will be widely used in management activities in administration and in institutions. And that will improve the education management in decision-making, monitoring and evaluation, etc. With the completion of the first stage of Chinese characteristic education informatization construction, its functions show gradually.

As for 2017, the gross enrollment rate of higher education is over 45%. China has rapidly entered the higher education popularization stage. China has 2,914 HEIs (Higher Education Institutions, HEIs), including 2,631 regular HEIs and 284 adult HEIs. With a higher education enrollment of 37 million, which is more than one-fifth of the whole world, China now has the largest body of higher education in the world. How to shift from a big country of higher education to a powerful country of higher education, how to transfer the higher education resources into human resources, how to make more contributions to the great rejuvenation of nation and the progress of human civilization, these are the issues of concern to the Chinese government. To become a powerful country of higher education, essentially is to promote the development of education and improve the quality.

It is well known that periodic evaluations and accreditations can effectively improve the quality of higher education. In China, HEEC has conducted multi-level external quality assurance activities in several aspects such as institutional evaluation, program accreditation, program evaluation and international accreditation. How to conduct high-quality and efficient external quality assurance for HEIs across the country is a serious consideration for HEEC. After more than 10 years of exploration and research, we now believe that information technology has been proved as an effective way to monitor and improve the quality when large numbers of HEIs are concerned. China has built the national data platform for the quality monitoring of higher education, which has featured with the largest scale, very strong functions and very advanced technologies. China has carried out the quality monitoring of higher education on the basis of massive data from national data platform. The data platform plays an important role in supporting the "Five in One" quality assurance framework of China: institutions' self-evaluation, institutional evaluation, program accreditation and evaluation, international accreditation and the data platform monitoring. It effectively improves the reliability and validity of quality assurance, and introduces new methods and models of quality assurance in higher education.

The Design of the National Data Platform for Regular Quality Monitoring in Higher Education

The National Data Platform for Regular Quality Monitoring in Higher Education is designed according to the inherent rules of teaching and learning in HEIs. As a web-based data collection system, the Platform collects and analyses data in order to monitor the education quality in the HEIs. All the data submission and analysis services are provided online. The Platform is a basic quality monitoring platform, and it is also a public education services platform for government officials and HEIs managers at all levels.

The Construction of the Platform

The start of the Platform could be retraced to the year 2007. With the special funding directly from the Ministry of Education, HEEC was authorized and began the Platform design program. After the formation of the overall framework and identifying the main data items, from June 2009 to October 2010, HEEC conducted 6 trial data collections in 23 HEIs in order to test the system. From the year of 2011, HEEC started the annual data collection and acquired data from 173 HEIs. Till now, after 10 years of hard work and accomplished 3 version upgradings, the Platform has now become a large data platform for data collecting, data extraction, data analysis, data mining and data visualization for education quality monitoring. With annual data collections, the Platform monitors the higher education quality objectively and efficiently. By the end of 2016, the National Data Platform for Regular Quality Monitoring

in Higher Education has collected data from more than 1200 colleges and universities across the country, covering 31 provinces.

The Platform Data Items

As for the national data platform, the Platform aimed to reflect the teaching status in HEIs when initially designed. In other words, the factors in the teaching and learning are highly valued. There are status data at the level of institutions, departments and programs, and data of teaching stuff, students and lectures, and also data of funding, infrastructures and learning outcomes. It includes 7 categories:

- Institutional Characteristics
- Education Resources
- Faculty
- Disciplines and Programs
- Teaching & Learning
- Students
- Quality Management & Monitoring

The Framework of the Platform

Designed to provide the "Information Services", the Platform took the data's characters like diversity, dynamics and variety into consideration, and integrated a framework of collection, analysis and application. The framework mainly includes data integration layer, data analysis layer and data display layer as in Figure 1.
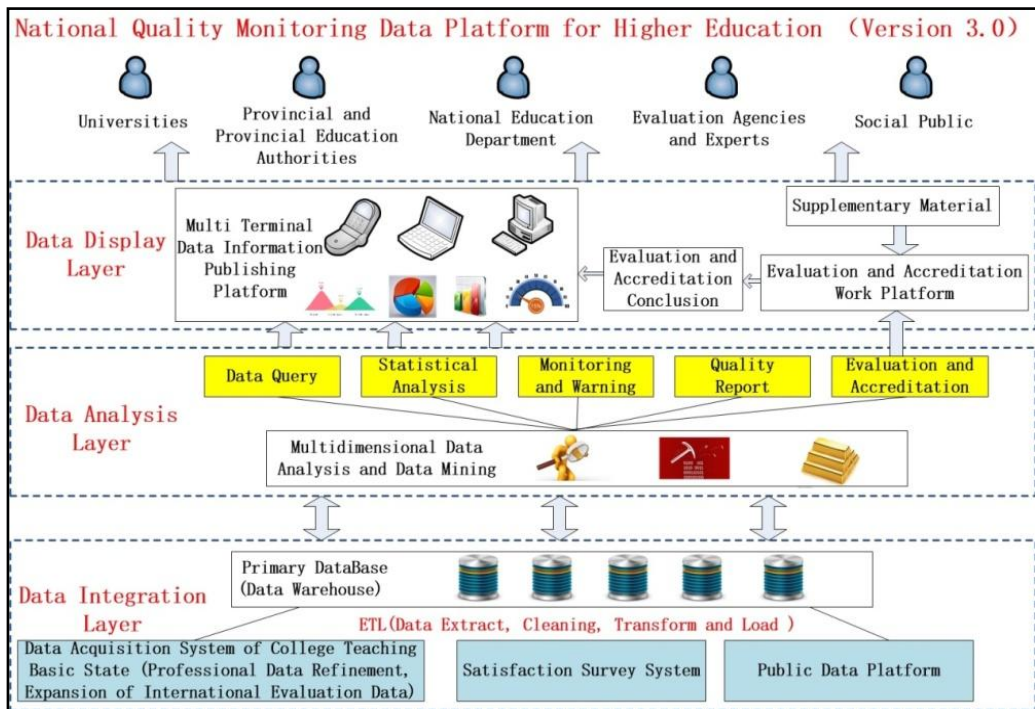

Figure 1. The framework of National Data Platform for Regular Quality Monitoring in Higher Education

The data integration layer includes the data collection system form HEIs and the survey system of satisfaction which collects the feedback from the graduated students and the employers. In addition, the Platform is also connected with the national public data such as economy, industry, population and scientific research, in order to check it from another angle outside the educational system. The data analysis layer cleans and extracts the data which was collected from the data integration layer, and forms a unified main database. According to the requirements of the users, the Platform could conduct specialized data analysis and data mining, which is the "heart" of the whole platform. The data display layer can send and display data to all kinds of users through PCs, IPads, intelligent mobile phones and other internet terminals. The data and quality monitoring reports could be published through public information releasing platform so as to meet the needs of governmental management, HEIs' quality assurance and public information enquiry. And the data also help the quality assurance activities conducted by HEEC, especially institutional evaluation and program accreditation.

The Applications of the Platform

"To collect is to serve". "Serve" is the keyword of the Platform applications. The Platform conducts data collecting and monitoring, but eventually the results and reports could be used by the governments, HEIs and the society. Now the Platform can provide 6 kinds of services including: institutional evaluation service, program accreditation service, quality reports, regular quality monitoring, decision making support and satisfaction survey. It now plays an important role in the national quality assurance in higher education.

Institutional Evaluation Support

Providing "Data Analysis Report" for institutional evaluation is an innovation in the new round of HEIs institutional evaluation. From the year 2009, the Platform has formed more than 400 reports for institutional evaluation. This helped to improve the reliability and validity of the work.

Program Accreditation Support

HEEC has conducted program accreditation with full coverage of major disciplines, such as the program accreditation in engineering, teacher education, medicine, agriculture and so on. The platform provides "Data Analysis Report" for each program accreditation.

Series of Quality Reports

Based on the massive data from the national data platform, HEEC has developed and issued series of quality reports for 5 years. We have published National Quality Report on Higher Education, National Quality Report on Engineering Education, National Quality Monitoring Report on undergraduate Education of Newly-built HEIs, National Quality Report on undergraduate teaching and Performance report on eligibility evaluation of newly-built HEIs. This provides the public and HEIs with the authoritative information about the higher education quality.

Regular Quality Monitor

By annual teaching status data collecting, the platform conducts data analyzing and research. It monitors the education quality and serves all levels of higher education: nation-wide, each province, different industries, colleges, universities, departments and even courses. This helps the users to gradually form the quality responsibility and the quality assurance culture in HEIs.

Decision Making Support

The national data platform can carry out data comparison and analysis according to the industry, region, and type and so on. It can conduct early prediction and support governmental decision making by data analysis and comparison. It has promoted the modernization of the system of higher education governance.

Satisfaction Survey

The stakeholder's satisfaction is an important index to measure the quality of higher education. The platform has the online satisfaction survey functions. It could conduct investigation of students, graduates and employers and provide the results to the HEIs. The results could help the HEIs to improve their development strategy and provide reference for higher education policy makers, labor market managers and related researchers. In 2016, HEEC conducted 100,000 copies of undergraduate satisfaction survey, 30,000 copies of graduate and 8,000 copies of employers.

The Influences of the Platform

Nationwide full-scale data has been collected in the National Data Platform for Regular Quality Monitoring in Higher Education. HEEC conducts regular quality monitoring based on the data and evidence, thus supporting the periodic institutional evaluation and program accreditation, which significantly improves the reliability and validity of evaluation and accreditation. Based on the data platform, HEEC annually publishes series of national quality reports on higher education. The achievement of the data platform above is not only an important milestone of quality assurance in China, but also a creative endeavor in the international quality assurance activities.

The platform's functions and contributions have already got the public and governmental acknowledgement. The program of the Platform design got the governmental Prize of Teaching Achievement Award. More and more institutions and provincial governments have ordered data analysis report. With the development of the Platform, the international influence of the Platform is expanding. Some international experts gave the comments: "The Platform can collect vast amount of data and produce data report for each institution in evaluation and also help to form the national quality report. It is very impressive", "The practice of regular quality monitoring and quality report releasing based on the Platform data is advanced in the world. This gives a solution and good practice example for all the big countries to conduct the quality assurance work". It can be said that this work of the Platform has opened a new way for nationwide quality assurance work in higher education.

The National Data Platform for Regular Quality Monitoring in Higher Education the important practice of using information technology to ensure the quality on nation-wide scale in the late 10 years of HEEC. Through collecting, analysis and application, HEEC formulates serial data analysis and quality reports. These reports facilitate the national quality assurance work such as institutional evaluations and program accreditations. The annual collection of data makes it possible for regular quality monitoring for all the HEIs. Now the National Data Platform for Regular Quality Monitoring in Higher Education works well. We wish through further work to explore more useful functions to higher education quality assurance, such as artificial intelligence, to make it provide more comprehensive and efficient services.

QUALITY ASSURANCE OF HIGHER EDUCATION INSTITUTIONS IN KOREA

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Abstract

   Accreditation is an effective tool for ensuring accountability in higher education that has been used in many countries. Over the last few decades, governments around the world have been concerned about quality assurance of Higher Education Institutions (HEIs). South Korea has spent a significant amount of resources to focus on higher education over the last few decades. Statistical data provided by global organizations show that enrollment and completion rates of students in higher education in South Korea are higher as compared to other OECD countries. To assure quality of higher education, the Korean Council for University Education (KUAI) has conducted university accreditation since 2011. The main purpose of this paper is to explain about KUAI's main role focusing on accreditation process, evaluation contents.

   Keywords: *accreditation, quality assurance, enrollment and completion rates, KUAI*

I. Introduction

   Demands for HEIs have continued to increase, as governments and the public have focused more on higher education quality and its accountability. We live in a "knowledge-based" society. UNESCO mentions that "a knowledge society is a society that is nurtured by its diversity and its capacities" (UNESCO, 2005). Today, our society requires people to continue their education and to find more effective ways to do so. Many factors have facilitated higher education over the world, and most of them are closely related to market-forces and economic development and/ or improvement in many countries. Since more high school graduates and non-traditional students have started to attend HEIs in response to these societal influences, higher education enrollments have increased globally.

   Such an increase in the enrollment and completion rates has advanced South Korea with regard to higher education. There is little doubt that this fact guarantees that South Korea has made an effort to improve and facilitate the development of higher education. Unfortunately, it does not necessarily mean that the quality and competitiveness of South Korean higher education is also ranked in top in the world.

   Since 2011, South Korea began to use accreditation to assure quality of HEIs. It aims at improving quality of higher education but it is not certain that this has been effective, in that South Korea as it continues to struggle to assure the quality of higher education. It is no exaggeration to say that human resources are the primary resources available in South Korea.

   South Korea has already joined the ranks of advanced countries in terms of electronics and automotive industry; nonetheless, unlike these sectors, higher education in South Korea still lies on the border between advanced and developing countries with regard to competitiveness and global reputation.

II. The role of KUAI for quality assurance in higher education institutions

The Korean University Accreditation Institute (KUAI) was established in 2009 and began to conduct accreditation of HEIs in 2011. KUAI explains that "our primary goal is to promote national competitiveness through transparent and rigorous accreditation for Korean universities, which enhances university autonomy and strengthens accountability". In South Korea, accreditation is not mandatory; rather it is based on voluntary participation.

Since 2011, KUAI has been once again recognized as an accreditation institute of evaluation and accreditation for higher education by MOE to implement the second round of the institutional accreditation which will take another 5-years, staring from 2015 to 2020. KUAI develops standards and guidelines for qualitative improvements in university education, contributes to promoting the development of university education and fosters talented human resources by conducting the accreditation process.

The primary purpose of accreditation is to provide HEIs with guidelines, including minimum requirements and accreditation standards, so as to strengthen the quality of higher education. Consequently, accreditation plays a significant role in ensuring quality of HEIs in Korea, which will thereby positively affect competitiveness of HEIs. According to KUAI, the main roles of accreditation are as follows.

1. Assuring and improving university education quality assurance
2. Strengthening university responsibility with the expansion of institutional autonomy
3. Satisfying the public's right to know about university education quality
4. Increasing international acceptability of the evaluation system

A University should apply for accreditation by deadline. As deadline for application is approaching, KUAI holds presentation meetings to inform universities of the schedule and evaluation criteria. After this session, universities apply for accreditation and start preparing self-evaluation report. Meanwhile, KUAI holds a workshop on self-evaluation report for those who work at each university. The purpose of this workshop is to provide universities with detailed information regarding evaluation criteria as well as how to prepare a self-evaluation report. Once we've done with workshops for universities, KUAI starts to organize an evaluation group. This group mainly consists of professors recommended by each university. KUAI trains them through intensive workshops. Each year KUAI selects evaluators among those who attend intensive workshops. KUAI takes a look at evaluators' qualification through basic information, qualifications, and attitude towards accreditation.

Universities have to submit self-evaluation reports by deadline and then they should prepare a site visit for evaluators. Meanwhile, KUAI holds a meeting for universities. After the self-evaluation reports have been submitted to KUAI, evaluators do a site visit for evaluation. After that, evaluators make an evaluation report. Evaluators discuss evaluation results and then make a decision. Universities may make a formal objection if they want to get reassessment and/or disagree with results. Figure 1 shows accreditation process briefly.

Figure 1. Accreditation Process

III. Evaluation Contents

Evaluation is to be done with structure of evaluation content which contains evaluation category, evaluation area, evaluation criteria and key evaluation criteria. Key evaluation which contains 1) quota of full-time faculty, 2) number of facilities, 3) new student enrollment rate, 4) retention rate, 5) ratio of educational expenditure to tuition, 6) ratio of scholarships to tuition and these are essential since universities can apply for accreditation only if they can meet key evaluation criteria.

Evaluation criteria consist of 5 categories, 10 areas, and 30 criteria. Evaluation criteria is a checklist which includes indicators used to assess compliance with the standards, and the findings of the evaluation are compiled to provide a basis for the decision on accreditation.

Table 1. Details of evaluation categories and areas

Categories	Areas	Criteria
1. Mission and Management	1.1 Management	1.1.1 Educational Objectives
		1.1.2 Development Plans and Specializations
		1.1.3 Self-review
	1.2 Finance	1.2.1 Financial Resources
		1.2.2 Budgets and Management
		1.2.3 Audits
2. Education	2.1 Academic Programs	2.1.1 Organization and Administration of General Education Programs
		2.1.2 Organization and Administration of Major-specific Education Programs
		2.1.3 System for Enhancing Academic Programs
	2.2 Teaching & Learning	2.2.1 Classes and Academic Courses
		2.2.2 Academic Records Management
		2.2.3 Support and Development of Teaching and Learning
3.Institutional Community	3.1 Faculty	3.1.1 Faculty Recruitment Systems
		3.1.2 Faculty Treatment and Welfare
		3.1.3 Support for Faculty Education and Research
	3.2 Staff	3.2.1 Staff Recruitment Systems
		3.2.2 Staff Treatment and Welfare
		3.2.3 Development of Staff Expertise
4.Educational Facilities and Students Support	4.1 Educational Facilities	4.1.1 Classrooms and Laboratories
		4.1.2 Student Welfare Facilities
		4.1.3 Libraries
	4.2 Student Support	4.2.1 Student Counseling System and Graduate Employment Support
		4.2.2 Support for Student Activities and Safety Management
		4.2.3 Aid to Minority Students
5.Achievements and Social Responsibilities	5.1 University Outcomes	5.1.1 Research Performance
		5.1.2 Educational Achievements
		5.1.3 Student Satisfaction
	5.2 Social Responsibilities	5.2.1 Community Service Policies
		5.2.2 Outcome of Community Service
		5.2.3 Contribution to Community and Industry

IV. Conclusion

The history of accreditation in South Korea is very short and, unlike many other countries, particularly the U.S., the UK and Australia, HEIs have been controlled by the central government and have had no autonomy. The Korean government has controlled all forms of HEIs, which could have been one of the decisive factors affecting the rapid development of higher education over the last few decades. However, the knowledge-based economy, globalization, and cross-border education require Korean higher education to be more accountable and effective.

South Korea has a very short history of accreditation under legislative regulation. There is no arguing that accreditation, in particular, institutional accreditation, should be considered the most important factor to improve and foster the development of HEI quality in South Korea. By studying the role and purpose of accreditation in other advanced countries, accreditation in South Korea can be improved.

Accreditation systems should be the primary tool for defining and assuring quality in the delivery of higher education. In other words, if accrediting agencies and processes can ensure that HEIs perform well, then those agencies have an important role to play in society. To make higher education institutions more accountable for assuring performance, accreditation in South Korea should be more consistent and transparent. Also, the accreditation system needs to focus more on outcome-based accreditation. Accrediting process should evaluate institutional effectiveness and the results need to be tied to federal funding.

All in all, each country has different backgrounds in accreditation specific to quality assurance; national goals and purposes are also different. Nevertheless, the most important thing that South Korea should take away is that many countries are forced to demonstrate quality of higher education through quality assurance systems. A strengthened accrediting system should play a significant role in higher education. The accrediting system can be major vehicle to promote innovation of higher education if its standards and processes can be revised to be more open and supportive of diversity in higher education institutions.

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III. NEW ASSESSMENT METHODOLOGIES IN HIGHER EDUCATION

AGENCY FOR SCIENCE AND HIGHER EDUCATION INTERNAL QA SYSTEM

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Abstract

ASHE is an independent national agency for external evaluation in higher education and science in the Republic of Croatia. It operates in accordance with the international Standards and Guidelines for Quality Assurance in the European Higher Education Area (ESG). Based on the results of external evaluation conducted by the European Association for Quality Assurance in Higher Education (ENQA), ASHE became a full member of ENQA, as well as a member of the European Quality Assurance Register for Higher Education (EQAR). ASHE has established a quality system in accordance with ISO 9001 and ESG standards. It supports ASHE's sustainable development, and fulfillment of the adopted mission, policy and strategic goals. The development of business processes is possible only in synergy with continuous and plan-based development of human resources, the most important resource. Feedback on satisfaction of ASHE employees and various stakeholders is analysed and used for improving business processes and the satisfaction of those participating in them. It supports the establishment of the organizational quality culture, which includes self-assessment on both individual and institutional basis, while being open to participation in various external evaluation procedures. The results of evaluation procedures encourage objective consideration of advantages and deficiencies, as well as joint implementation of agreed improvements.

Keywords: *international standards, internal quality assurance, higher education.*

1. Introduction

The setting up of the European Higher Education Area (EHEA) is the result of the European-wide Bologna Process for the reform of higher education. Quality assurance has been one of the main pillars of the Bologna Process from the very beginning. Some of the main quality assurance milestones within the Bologna Process are the adoption of a common set of standards for internal and external quality assurance in Europe, namely the Standards and Guidelines for Quality Assurance in the European Higher Education Area[1] (ESG) and the establishment of the European Quality Assurance Register (EQAR) in 2008. EQAR is managing the register of quality assurance agencies that have demonstrated their compliance with the ESG through an external review. ESG are composed of three parts, addressing internal quality assurance, external quality assurance and the quality assurance of the quality assurance agencies. ESG call for agencies to have internal quality assurance (IQA) procedures in place. These procedures are used to demonstrate to stakeholders that agencies are dedicated to improving their own performance.

2. Setting up a national QA agency in Croatia

Pursuant to the Recommendation of the European Parliament and the Council on further European cooperation in quality assurance in higher education[2] (2006/143/EC), a system of internal and external QA in higher education was established in the Republic of Croatia, in line with ESG.

The Croatian Agency for Science and Higher Education (ASHE) was established in 2005 as the only national agency for external quality assurance in higher education. The Agency was a new institution in the system of higher education and science, and had yet to build its reputation and gain the trust of stakeholders for its independent work and credibility. The Agency's management faced a number of challenges at that time; new employees needed to be recruited and quality work processes established. At that time, there were no study programmes at the national level on QA in higher education, or, for that matter, the management and leadership in higher education. This meant that a continuous and planned investment in human resources development was needed.

In 2006, ASHE Management Board adopted a decision on the establishment of internal quality management system in line with ISO 9001[3]. This was the first step towards a systematic internal quality assurance.

One of the strategic decisions at that time was to join international associations like *European Association for Quality Assurance in Higher Education* (*ENQA*) and *International Network for Quality Assurance Agencies in Higher Education (INQAAHE)*. This served as an incentive to meet international standards for QA agencies, cooperate with foreign agencies, learn from the experiences of others, and develop own QA processes in the national context, by applying good practice.

In order to stimulate a structured capacity building of employees, the Agency made use of the INQAAHE QA Graduate Programme, organising in-house seminars and jointly going through all the thematic units of the INQAAHE programme. We have learned together, at the same time establishing and developing ASHE processes and IQA system.

The reforms brought about by the Bologna process resulted in new legislation, the Act on Quality Assurance in Science and Higher Education (Official Gazette 45/09), which re-defined the organisational structure and scope of work of ASHE.
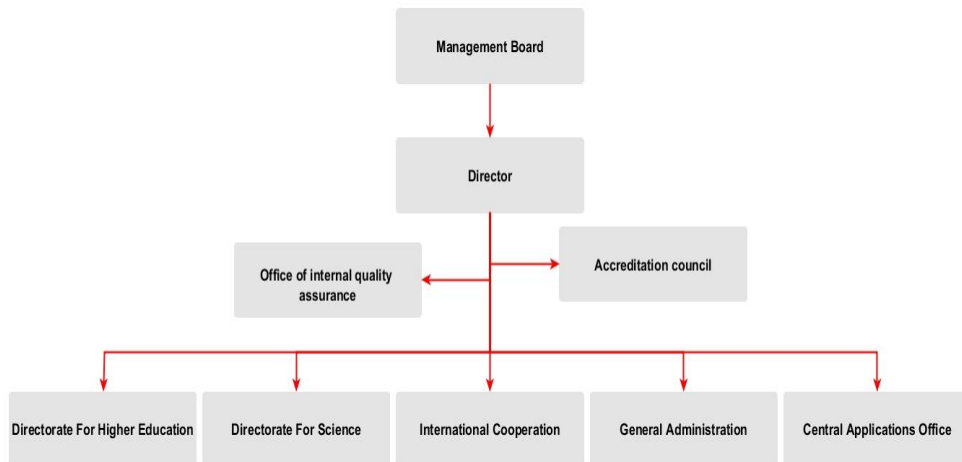
Figure 1. ASHE organisational chart

ASHE is governed by the Management Board of 9 members, who are appointed or dismissed by the Croatian Parliament. The Management Board appoints the Director of the Agency and, among other things, adopts strategic documents, annual reports and financial reports.

The Director of the Agency represents the Agency, manages it on a daily basis and takes care of its sustainable development.

The Accreditation Council is ASHE's expert body, comprising 11 members appointed for a four-year term by the ASHE Management Board, at the recommendation of the Director. The Accreditation Council is responsible for adopting criteria and procedures for external evaluations, adopting annual plans of external evaluation, appointing reviewers/panel members, reviewing and adopting their evaluation reports, and issuing decisions on the basis of these reports.

The main scope of ASHE's work is external quality assurance in higher education and science; all related activities are the responsibility of ASHE's Directorate for Higher Education and the Directorate for Science, who work closely with the Accreditation Council. ASHE also comprises the national ENIC/NARIC Office, which carries out the procedure of professional recognition of foreign higher education qualifications, as well as the Central Applications Office (CAO), the national centre for applications to study programmes, i.e. higher education institutions in Croatia. ASHE also provides expert and administrative support to the work of various national bodies, such as the National Council for Science, Higher Education and Technological Development (a strategic body in charge of the development of the system of science and higher education), and the Committee for Ethics in Science and Higher Education. Trainings the Agency provides to various groups of stakeholders in the system of science and higher education are also an important part of our activities.

An integral part of ASHE is also the Office for Internal Quality Assurance. The purpose of the Internal Quality Assurance Office is to ensure the implementation of the ESG and ISO 9001 standards through effective and development-oriented integrated IQA systems that stimulates mutual inspiration, capacity building in terms of IQA, sharing of experiences and good practices. Our experience in setting and developing IQA system taught us that having procedures on paper is one thing, while a successful implementation of procedural improvements in agency is the real challenge.

3. The development of an integrated quality system

A decision of ASHE Management Board to establish IQA system in line with ISO 9001 was the first step towards a systematic internal quality assurance.

With the adoption of the Act on Quality Assurance in Science and Higher Education in 2009, ASHE became the only national body responsible for carrying out external evaluation in higher education and science. New legislation prompted changes to the internal organisation and encouraged further specialisation of Agency staff in external quality assurance. This served as an additional incentive for the development of an integrated quality system, in line with both ESG and ISO 9001. A special attention is paid to the continuous professional development and training of ASHE employees, including study visits to other quality assurance agencies and higher education institutions, and participation in conferences and seminars.

Institutional and individual development continued through the implementation of ISO 9001, training of ISO internal and lead auditors within Agency staff, organising workshops and seminars on the importance of communication, self-evaluation and continuous improvement and innovation, as a way of encouraging inter-departmental communication and methods of collecting feedback from clients, stakeholders, and employees. Since the very beginning, information on staff satisfaction has been systematically collected at ASHE, also via the annual satisfaction survey. With the changing organisational and individual needs, the number of survey questions has been increased over the years.

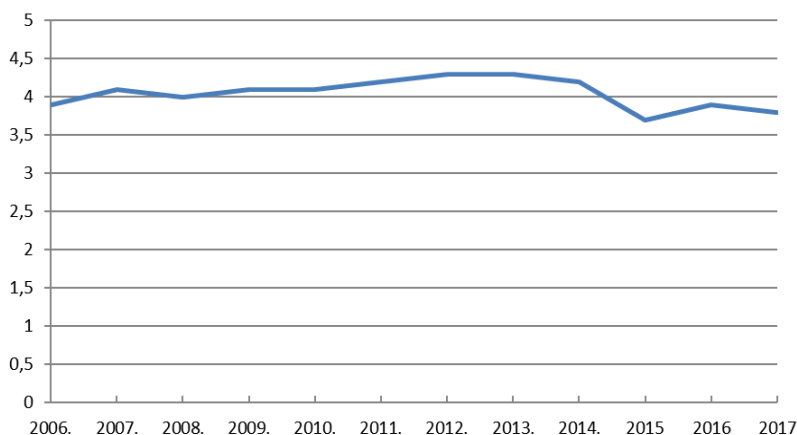Figure 2 shows the data on ASHE staff satisfaction from 2006-2017.

Figure 2. ASHE staff satisfaction based on Staff satisfaction survey from 2006-2017

A host of data on the quality of ASHE processes and services was collected through surveys or e-mails, though organised discussions, round tables, meetings or various projects, whereby the professionalism, efficiency, good cooperation, accuracy and a very good organizational skills of ASHE staff was frequently emphasised. The collected information is analysed, and based on the results, a quality index is calculated. Trends are annually monitored and discussed at the level of departments, the Agency, the Management Board and the Accreditation Council.

The provided feedback helps to objectively and reliably identify institutional strengths and good practices, but also areas where improvements are needed. Based on this information, the Agency develops action plans for a systematic improvement and development.

Figure 3 shows data on client satisfaction with ASHE services, by individual departments.
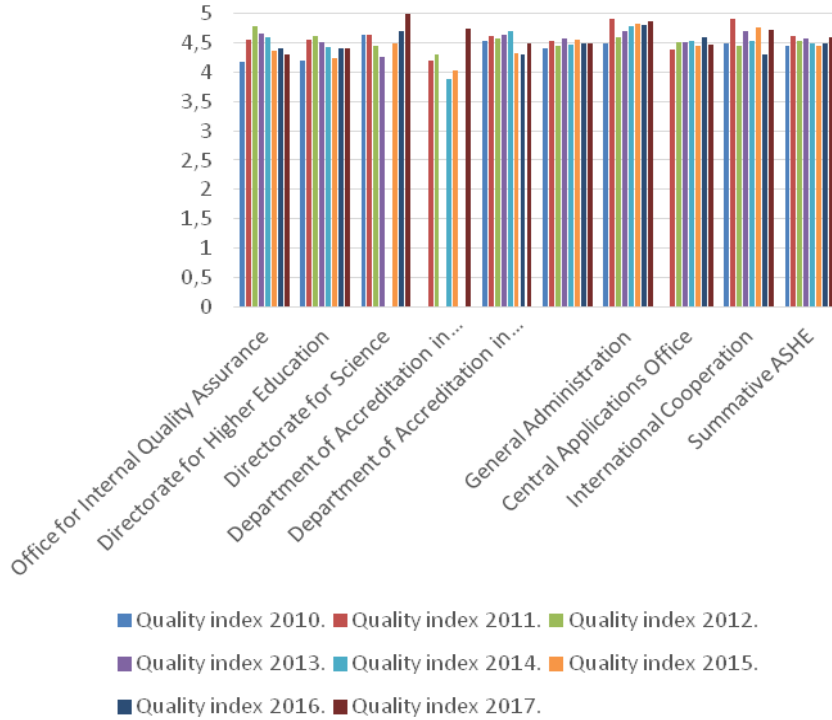
Quality index 2010. ■ Quality index 2011. ■ Quality index 2012.
Quality index 2013. ■ Quality index 2014. ■ Quality index 2015.
Quality index 2016. ■ Quality index 2017.

Figure 3. Client satisfaction with ASHE services from 2010-2017

The necessary adjustment to the new ISO 9001:2015 standard served as an incentive to introduce risk management. These developments stimulated discussion on intended quality goals, defining indicators and achieving defined end results, as well as defining risks and taking appropriate steps to avoid, accept, mitigate or transfer the risks.

ASHE participated in the work of ENQA Staff Development Group, which produced a unique competencies framework for QA professionals working in all ENQA member agencies. The agencies can use this framework in designing job descriptions, staff recruitment and further development of employees. The document defines competencies for both staff that is new to this sector and experienced professionals, including and a wide range of activities that can be used by the agencies in staff development (guidelines for all key points for professional QA staff management and development - defining the job, recruitment and selection, induction of employees, professional development, and performance review). (Source: ASHE 2016 Annual report[4]).

The continuity of investment in human resources and professional growth and development of every employee is reflected in ASHE's participation in MAMFORCE project "Towards the real equality between men and women - harmonising work and private life", under the auspices of the Office of Ombudsperson for Gender Equality of the Republic of Croatia, and in cooperation with Mamforce Association.

MAMFORCE © Standard is awarded to organisations that recognize the needs of their employees and manage to adequately organise their work and working environment, while respecting the principles of the balanced professional and private life, and opportunities for equal growth and development of every employee.

In order to review ASHE's status in relation to the relevant areas for meeting conditions for obtaining the MAMFORCE© Standard, the evaluation process was based on an audit procedure that encompassed the following areas: satisfaction and engagement, organization of

work/responsible management, culture of support and flexibility, family responsibilities, leadership and development, and talent management.

The audit resulted in a report that, along with the review of the situation, contained recommendations for improvements within each of the evaluated areas. The results were presented to ASHE as the first public-sector organization that exercised the right to use the status of BASIC MAMFORCE© Standard until September 2017. The Agency prepared a one-year action plan for the implementation of planned activities aimed at further improvement of working conditions and balance between private and professional life. The improvements carried out within 12 months were evaluated during the new audit, and ASHE gained the right to use CHANGE MAMFORCE standard.

4. Compliance with the ESG, Part III

ESG 3.1 Activities, policy and processes for quality assurance

All ASHE activities are carried out in line with the Act on Quality Assurance in Science and Higher Education. As already stated, ASHE mission is to promote the importance of quality assurance in higher education and science. An essential part of fulfilling the mission is a regular implementation of external evaluation procedures compliant with ESG, Part II. ASHE bodies comprise representatives of all stakeholders in higher education and science, including students. The international dimension has been provided by the membership of Croatian academics permanently employed abroad, and by participation of international experts in peer panels.

ESG 3.2 Official status

ASHE was established by the Croatian Government Decree in 2005 and its role as the only national body in charge of carrying out external evaluation of quality assurance procedures in science and higher education was re-defined in the Act on Quality Assurance in Science and Higher Education. The Accreditation Council adopts an accreditation recommendation based on the opinion of its expert body, upon which the Ministry issues a final decision. In audit, the final decision rests with the ASHE Accreditation Council.

ESG 3.3 Independence

The Agency's organisational independence was defined in the Act on Quality Assurance.

Operational independence is ensured by the independence of the Agency's bodies and by the independence of expert panel members. Expert panels regularly include foreign experts, which prevents potential influence of various interest groups within a small Croatian academic community. Members of expert panels produce a final report and pass a quality grade, but can also submit a separate evaluation report. The final decision rests with the Accreditation Council, based on the submitted expert panel report. All decisions are passed by the Accreditation Council by a two-third majority. The Agency's independence is also secured by funding from the state budged combined with the EU funds, in order to maintain financial stability.

ESG 3.4 Thematic analysis

The Agency has a special research office that conducts annual analyses and publishes conclusions of conducted evaluation procedures.

ASHE also compares data and information collected in external evaluation procedures with the data and information from other sources, to provide insight into certain aspects of Croatian higher education. These findings are presented at conferences and published on ASHE website in the form of analyses.

ESG 3.5 Resources

ASHE annual budget is a part of the state budget allocated to the Ministry. State budget is adopted by the Parliament upon the Government proposal.

Regarding the IT infrastructure, ASHE employs a range of information tools and systems for data collecting and processing. Some of these tools are national information system, and some are owned and maintained by ASHE.

The most important investments made by the Agency are those in human resources. Agency spends a lot of resources on international expert panels; in addition to fees, ASHE also covers their travelling and accommodation costs.

ASHE employees work by following and applying the latest trends in quality assurance and undergoing appropriate professional training.

ESG 3.6 Internal quality assurance and professional conduct

ASHE's system of internal quality assurance is based on the legal framework regulating ethical conduct in the academic community and professional conduct and integrity of employees in the public sector, as well as the ESG and the ISO 9001. It is based on the Quality Policy and related documents, and involves regular collection of feedback from all ASHE staff, everyone involved in external quality assurance procedures, and all stakeholders. Methods of collecting feedback are direct – through surveys, written correspondence and meetings, and indirect – through analysis of press clippings and regular cooperation with the academic community in various bodies, workshops and enhancement-oriented projects.

ESG 3.7 Cyclical external review of agencies

ASHE underwent the first international review of compliance with ESG in 2011. In line with its obligation to undergo cyclical external review in a five-year period, ASHE initiated a new process of external review conducted by ENQA in 2015, for the purpose of securing full membership in ENQA and registration into EQAR, which was done in 2017.

5. Conclusion

Last year, the Agency underwent the following external evaluation procedures. The international accreditation carried out by ENQA confirmed the Agency's compliance with the ESG and resulted in the renewal of membership in ENQA and EQAR. The expert panel commended the Agency for the quality of staff, their contribution and sound knowledge of national and international quality assurance practices. ENQA also commended good cooperation with various stakeholders involved in ASHE's activities, and participation of foreign experts in various procedures. The example of good practice cited by ENQA is the role of coordinators – employees of the Agency assisting experts in interpreting various criteria and in charge of reporting consistency.

External evaluation was also carried out in accordance with ISO 9001 and the ASHE's quality assurance system was assessed as efficient, while meeting the conditions for transition to the requirements of ISO 9001:2015.

In order to emphasize its commitment to the welfare and needs of its employees, the Agency went through another independent review of the working conditions and human resource management practices, and was awarded the CHANGE MAMFORCE STANDARD.

The Croatian Society for Quality charters awarded in 2014 and 2017 for ASHE's special contribution to education and promotion of quality (for organization) are another indicator of ASHE's contribution to the development and promotion of the quality culture in science and higher education, and the broader community.

These evaluations contributed to the Agency's good reputation and recognisability, started further improvements through the internal quality assurance system and confirmed ASHE's significant role in quality assurance in higher education.

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WORLD-CLASS UNIVERSITIES AND DISCIPLINES EVALUATION: METHODS AND RESULTS BASED ON THE EVALUATION PRACTICE OF CHINESE ACADEMY OF SCIENCE AND EDUCATION EVALUATION

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Abstract

Building world-class universities and disciplines is of extreme importance in China. Chinese Academy of Science and Education Evaluation has carried out the world-class universities and disciplines evaluation in order to know which universities are world-class universities, and which disciplines are world class disciplines. The evaluation employs a unique index system, and collects data in an authoritative and credible way. The evaluation results indicate that there is a huge gap between Chinese universities and world-class universities.

Keywords: world-class universities, higher education evaluation, discipline evaluation, evaluation index system, Chinese higher education.

1. Introduction

World-class university is a term adopted largely interchangeably with globally competitive universities, elite or flagship universities, those words have become the catch phrases in higher education since the 21st century. World-class universities are not only the cradle of science, technology and education, but also the fountain of modern culture and ideas. Establishing world-class universities is one of the most effective capacity building approaches for a developing country.

In the innovating era, with the fierce competition for talents all around the world, many countries realize the strategic importance of building world-class universities. Governments have introduced various "Excellence Initiatives" in countries such as Germany, Demark, Russia, South Korea, Spain, Egypt and so on. The world-class university movement is reshaping the landscape of the world higher education.

World-class universities have common characteristics, for instance, excellence in education, research, development and dissemination of knowledge, and the activities contributing to the cultural, scientific and civic life of society (Levin, et.al.,2006). Those characteristics can be condensed into six key words, which are "world", "research", "students",

"education", "knowledge" and "create" (Slyusarenko, Olena,2015). Creating a culture of innovation is the essence of becoming and staying a world-class university (Tierney, William G., 2014). World-class universities' policies can bring public value, such as increased exogenous resources, systemic improvement, reputational benefits in higher education (Cremonini, Leon et.al.,2014). To build world-class disciplines is the foundation of world-class university establishment. With a major concentration of teaching and research it is possible for a specialized university to become a world-class university (Zhimin Liu, et.al.,2016).

Rather than self-declaration, the elite status of world-class universities relies on international recognition (Altbach & Salmi, 2011). As the main way of higher education academic performance evaluation, the continued importance of university rankings has served to fuel the growth of the world-class university movement. The ranks of the Times Higher Education (THEs), US News & World Report (USNWR), Quacquarelli Symonds World University Ranking (QS), Academic Ranking of World Universities (ARWU) have done the world universities rankings by employing different index systems. Nowadays, the higher education stakeholders commonly use those four major global university ranking systems. The relationship, functions and effects of universities rankings and world-class universities building are examined by numerous studies (Lu Liu, Zhimin Liu, 2016; Van Raan, 2005; Aguillo et al., 2005; Hazelkorn, 2007; Rauhvargers, 2013). In view of the significance of universities evaluation, the Chinese Academy of Science and Education Evaluation has conducted global universities ranking since 2007. Moreover, the Chinese Academy of Science and Education Evaluation's global universities ranking aims to providing references for education authorities, universities, students and their parents, and other stakeholders to have a comprehensive understanding of the panorama and details of the universities.

Universities rankings have attracted more and more attention from all walks of life. Nevertheless, the evaluation and ranking practice of the Chinese Academy of Science and Education Evaluation has rarely introduced to the world. This paper tends to analyze 2017-2018 global universities ranking results of the Chinese Academy of Science and Education Evaluation. The evaluation idea and methodology will be discussed systematically and thoroughly.

2.Evaluation Principles

Given the considerable differences of the universities ranking's ideas and goals, it is important to know the principles of a certain universities ranking. The leading idea of the Chinese Academy of Science and Education Evaluation is putting the universities' teaching, research, social service performance and social contribution as the basic standard. The ranking makes every effort to guarantee to get the "scientific, reasonable, objective, justice" ranking results. Based on years of ranking experience and the above ideas, eight principles came into being gradually. Chinese Academy of Science and Education Evaluation adheres to the eight principles firmly in the evaluation, the eight principles can been seen below.

First of all, the adherence of the combination of management-oriented and market-oriented.

In the second place, dealing with the relationship between qualitative and quantitative research properly, adhering to the principle of the combination of qualitative and quantitative evaluation.

Thirdly, dealing with the relationship between input, product and efficiency properly, giving consideration of input, product and efficiency in evaluation.

Fourthly, dealing with the relationship between natural science and social science properly, adhering to the principles of natural science and social science of equal importance, and putting classified evaluation principle into practice.

Fifthly, dealing with the relationship between scale and efficiency properly, laying particular stress on efficiency appropriately.

Sixthly, dealing with the relationship between quantity and quality properly, laying particular stress on quality appropriately.

Seventhly, dealing with the relationship between teaching and research properly, laying appropriate stress on research of top universities.

Eighthly, dealing with the relationship between Chinese data and foreign data properly, laying appropriate stress on foreign data.

The Chinese Academy of Science and Education Evaluation adheres to those eight principles strictly so as to provide scientific and objective reference to universities' stakeholders.

3.Research Methods

3.1 The evaluation objects and scopes

The 2017-2018 world-class universities and disciplines' evaluation of Chinese Academy of Science and Education Evaluation includes 1506 universities and their disciplines worldwide. We adopt the unified data source and the unified statistical standard in the process of universities and disciplines' evaluation. The universities which have two or more disciplines in American Essential Science Indicators database (ESI) are in the range of the world-class universities in this ranking. It is worth mentioning that Chinese universities which have one or more disciplines in ESI are the evaluation objects as well. In addition, ESI database sets 22 disciplines in total, including an interdisciplinary subject. Ranking according to their paper's rate of citing of universities or research institutions by different disciplines, only the top 1% of the disciplines can be included in the ESI disciplines ranking list. There are altogether 5620 universities and research institutions in the ESI disciplines ranking. We screen the qualified universities based on the screen standard strictly, as a result, only 1506 universities meet our requirements, the 1506 universities act as the objects in the evaluation. As far as this is concerned, the objects quantity and representativeness can be guaranteed.

We investigate all the evaluation objects thoroughly, and put the university which uses different names as one university. For instance, "ETH ZURICH" and "SWISS FED INST TECHNOL ZURICH" are one university in different names in fact, and the merged university's name is Swiss Federal Institute of Technology. Therefore, the data of Swiss Federal Institute of Technology is the added date of ETH ZURICH" and "SWISS FED INST TECHNOL ZURICH" in our evaluation. Besides, the merged universities are PIERRE & MARIE CURIE UNIV - PARIS 6 and UPMC, UNIV TAMPERE and TAMPERE UNIV, VITA-SALUTE SAN RAFFAELE UNIV, UNIV VITA SALUTE SAN RAFFAELE and VITA SALUTE SAN RAFFAELE UNIV, and more than other 100 universities.

3.2 Data collection

We use the data from April to May 30th in 2017 in American ESI database as the paper indicator. As for the patent indicator, we adopt the American Derwent Innovations Index (DII) data from 2012-2016. In accordance with the disciplines setting characteristic of ESI and DII, we put the chemistry, electronic & electric and engineering those three disciplines' patent into chemistry, physics and engineering in ESI respectively. We downloaded the patent data in July 20th in 2017. Web ranking data is an essential part of university ranking. We take the Webometrics Ranking of World Universities (WRWU) which was conducted by the Spanish National Research Council Cybermetrics Lab as the web ranking references. We downloaded the web ranking's data in May 6th, 2017.

The connotation of the indicators from the above databases are as follows. First of all, the **Most Cited Papers** refer to the paper which the total citations list in top 1% in ESI database in a certain year and certain subject. In the second place, **Highly Cited Researchers**. We adopt global Highly Cited Researchers data published by Thomson Reuters technology information group in 201. In the third place, the **International Cooperation Paper** refers to the published paper which was compiled in cooperation by researchers from different countries

and areas. Fourthly, the **Number of Distinguished Alumni**. We use the world's top 100 most influential figures selected by 'Time Magazine' in recent 10 years, and the graduates' number who are Nobel Prize Winners and the Fields Medal Winners. Fifthly, **the 22 disciplines in ESI**. Arranged alphabetically, the disciplines are: Agricultural Science, Biology & Biochemistry, Chemistry, Clinical Medicine, Computer Science, Economics & Business, Engineering Science, Environmental Science and Ecology, Earth Sciences, Immunology, Material Science, Mathematics, Microbiology, Molecular Biology and Genetics, Integrated Interdisciplinary, Neuroscience and Behavioral Science, Pharmacology & Toxicology, Physics, Plant & Animal Science, Psychiatry and Behavioral Sciences, Social Sciences and Space Science.

3.3 The Establishment of Evaluation Index System

The world-class universities and disciplines' evaluation index are composed by faculty, teaching level, the capacity for scientific research, reputation influence of those four elements. As for university scientific research competitiveness evaluation, we use webometrics ranking as the reference indicators to examine universities' reputation. The number of highly cited papers is employed as the supplement indicator of research influence in the web context. So as to establish a comprehensive strength evaluation index from research outputs to realistic influence and then to the internet influence. Web ranking as the main internet influence indicator. We add reputation influence because web ranking has a wide coverage, all the data come from the internet, it will make the developing countries' universities have a place in universities ranking. The non-prestigious universities have a chance to show themselves in the ranking. However, other universities rankings do not possess these advantages, because the other universities rankings usually focus on the prestigious universities who have a long history, high social status, academic competence and influence. Therefore, it is hard to evaluate universities in underdeveloped area in the ranking system.

The web ranking in Chinese Academy of Science and Education Evaluation's 2017-2018 world-class universities and disciplines employs the data from Spanish National Research Council Cybermetrics Lab's Webometrics Ranking of World Universities, and the Chinese Key Universities Web Influence Ranking conducted by Wuhan University. The indicators are divided into five categories. Firstly, **the scale of websites**. Calculating the number of universities' website pages from important search engines such as Google, Yahoo!, Alta Vista, All the Web and Bing. Secondly, **the number of academic documents**. We search the academic papers, reports, and other related academic research documents in a certain university's website via Google Scholar. Thirdly, **the richness of the documents**. The number of various kinds of documents collected from search engines such as Google,Yahoo!,Alta Vista,All the Web and Bing. Different formats documents in Adobe Acrobat (pdf), Adobe Postcript (ps), Microsoft Word (doc), Microsoft Powerpoin (ppt)and Microsoft Rich Text Format (rtf)are included. Fourthly, **the number of be linked of the university's website**. Calculating the number of be linked of the university's website in the search engines like Yahoo!. Fifthly, **the display degree**. The display degree is calculated proportionally based on the number of a university's related web pages and the university entry's page views from Baidu. Every university's web rankings are calculated by the above five indicators proportionally. The detailed evaluation index system can been seen in figure 1.

Figure 1. Word-class universities and disciplines' evaluation index system

First grade indexes	Second grade indexes
Faculty	full-time teachers
	high cited scientists
Teaching	prestigious alumni
	the disciplines in ESI
Research	the published papers
	citations per papers
	international cooperation papers
	patents
Reputation influence	web influence
	highly cited papers

4. The definition of world-class universities and disciplines in world-class universities and disciplines evaluation of Chinese Academy of Science and Education Evaluation

It is necessary to clarify the operational definition of the world-class universities and disciplines before the ranking. According to Chinese Academy of Science and Education Evaluation's world-class universities and disciplines' definition, we define the top 600 universities as the world-class universities in the total 1506 universities. We divide the world-class universities into three levels after taking some Chinese universities' individual university mission and planning into consideration. The top 100 universities are the world's top universities. We mark five stars (5★) to those universities. The top 101-300 universities are world's high-level famous universities. We award four stars (4★) to those universities. The top 301-600 universities are world's high-level well-known universities. We award three stars (3★) to those universities. The world's top universities and world's high-level famous universities are world-class universities in our ranking.

Likewise, having a clear definition of world-class disciplines is the precondition of world-class disciplines' evaluation. We delimit the number of the world-class disciplines according to the 22 disciplines' evaluation units. We define the top 10% disciplines in a certain field of a university or research institution are the world-class disciplines. There are three levels of world-class disciplines. The top 1% (includes 1%) of a certain subject in a research institution or university is the world's top disciplines. The top 1%~5% (includes 5%) of a certain subject in a research institution or university is the world's high-level famous disciplines. The top 5%~10% (includes 10%) of a certain subject in a research institution or university is the world's high-level well-known disciplines.

In addition, Chinese world-class universities ranking is the same as the first-class universities competiveness ranking in Chinese Universities and Disciplines Evaluation Report (2017-2018). Chinese first-class disciplines in Chinese first-class disciplines ranking are the five stars (5★) disciplines in Chinese Postgraduate Education and Disciplines Evaluation Report (2017-2018).

5.Results

We get six major world-class universities and disciplines ranking lists, which are constituted by 40 sub ranking lists. The six major world-class universities and disciplines ranking lists are as follows. Countries and areas' research competiveness ranking, world-class universities comprehensive competiveness ranking, world-class universities' ranking by disciplines (22 disciplines in total), world-class universities' ranking by first grade indexes (4 first grade indexes), class universities' ranking by basic indexes (10 basic indexes), Chinese world-class universities and disciplines ranking (2017). This paper lists part of the ranking results in figure 2 to figure 4.

5.1 Countries and areas' research competiveness ranking

Figure 2. Countries and areas' research competiveness ranking (top 20)

Ranking	Countries/areas	Papers	Cited papers	Patents	High-cited paper	Web ranking	International cooperative papers	Total score
1	America	100.00	100.00	100.00	100.00	100.00	100.00	100,00
2	China	74.53	69.59	53.78	58.79	65.16	80.51	90,70
3	English	53.69	56.06	24.02	52.72	56.45	52.98	73,08
4	Japan	49.03	51.61	37.90	37.54	46.75	49.55	70,50
5	French	50.16	52.09	21.34	46.56	45.76	28.63	67,75
6	Germany	48.71	46.53	19.74	46.17	47.79	37.81	66,86
7	South Korean	38.95	34.47	39.22	29.70	36.36	39.93	62,67
8	Italy	42.76	43.80	12.84	39.61	43.10	34.15	62,66
9	Spain	38.52	39.09	19.22	32.50	41.23	28.97	60,25
10	Canada	38.01	34.66	17.19	35.47	37.04	39.64	59,75
11	China-Taiwan	34.89	38.10	27.37	23.73	37.95	34.59	59,74
12	Australia	36.03	33.54	14.96	33.55	36.71	40.01	58,48
13	Brazil	32.86	29.06	17.79	22.77	32.00	23.86	53,22
14	Turkey	30.87	31.97	7.52	22.55	29.79	30.65	52,21
15	Sweden	26.46	27.03	4.09	25.15	26.32	29.97	49,49
16	Netherlands	26.25	23.03	8.34	26.32	22.82	25.01	48,39
17	India	24.29	25.36	11.05	17.73	22.38	20.31	47,02
18	Poland	23.66	23.03	6.54	17.46	24.18	21.18	45,28
19	Iran	25.26	23.24	1.47	18.01	23.01	25.29	44,81
20	Belgium	20.96	20.31	10.19	20.61	19.89	15.33	44,37

5.2 World-class universities comprehensive competiveness ranking

Figure 3. World-class universities comprehensive competiveness ranking

Ranking	Universities	Countries/areas	Total score
1	HARVARD UNIV	USA	100.00
2	UNIV CAMBRIDGE	UK	94.33
3	STANFORD UNIV	USA	90.32
4	COLUMBIA UNIV	USA	89.75
5	NORTHWESTERN UNIV	USA	86.98
6	YALE UNIV	USA	86.72
7	UNIV EDINBURGH	UK	86.66
8	JOHNS HOPKINS UNIV	USA	86.45
9	UNIV MICHIGAN	USA	86.41
10	UNIV HONG KONG	China-HK	85.95
11	UNIV WASHINGTON	USA	85.67
12	UNIV TOKYO	Japan	85.09
13	UNIV TORONTO	Canada	84.11
14	UNIV CALIF BERKELEY	USA	84.07
15	UNIV CALIF LOS ANGELES	USA	83.74
16	UNIV PENN	USA	83.11
17	DUKE UNIV	USA	83.09
18	OHIO STATE UNIV	USA	83.06
18	MIT	USA	83.03
20	UNIV BRITISH COLUMBIA	Canada	82.18

5.3 World-class universities' ranking by disciplines (22 disciplines in total)

Figure 4. World-class universities' ranking by disciplines (22 disciplines in total)

Disciplines	Universities (total score) top 10 as examples
1.AGRICULTURAL SCIENCE (563 universities in total)	WAGENINGEN UNIV & RES CTR (100.00), UNIV CALIF DAVIS (89.48), CHINA AGR UNIV (89.32), CORNELL UNIV (86,77), UNIV SAO PAULO (86.52), GHENT UNIV (86.23), ZHEJIANG UNIV (83.27), UNIV FLORIDA (82.37), UNIV GUELPH (81.77), UNIV ILLINOIS URBANA-CHAMPAIGN (79.25)
2.BIOLOGY& BIOCHEMISTRY (645 universities in total)	HARVARD UNIV (100,00), MIT (81.10),CHINESE ACAD SCI (80.36),STANFORD UNIV (78.71),UNIV LONDON (77.89),UNIV CALIF SAN DIEGO (77.71), UNIV CALIF BERKELEY (75.77), UNIV COPENHAGEN (75.50),UNIV TORONTO (75.48),UNIV MICHIGAN (75.24)
3.CHEMISTRY (890 universities in total)	ZHEJIANG UNIV (100.00), UNIV CALIF BERKELEY (96.85), UNIV CHINESE ACAD SCI (96.51), TSING HUA UNIV (95.49), NORTHWESTERN UNIV (94.49), PEKING UNIV (92.68),NANYANG TECHNOL UNIV (92.66),MIT (92.11)UNIV SCI & TECHNOL CHINA (89.80),FUDAN UNIV (89.20)
4.CLINICAL MEDICINE (1303 universities in total)	HARVARD UNIV (100.00), UNIV LONDON (82.08),UNIV TORONTO (78.45),JOHNS HOPKINS UNIV (78.42),DUKE UNIV (71.68), UNIV PENN (71.46), UNIV WASHINGTON (71.27),UNIV MICHIGAN (70.55), UNIV PITTSBURGH (70.54), UNIV CALIF LOS ANGELES (70,06)
5.COMPUTER SCIENCE (311 universities in total)	TSING HUA UNIV (100.00), STANFORD UNIV (97.50), NANYANG TECHNOL UNIV (97.34), MIT (96.20), UNIV TEXAS AUSTIN (94.29), UNIV CALIF BERKELEY (93.40), HARVARD UNIV (92.42), UNIV PARIS SACLAY COMUE (92.17), NATL UNIV SINGAPORE (90.69), UNIV LONDON (89.27)
6.ECONOMICS & BUSINESS (226 universities in total)	HARVARD UNIV (100.00), UNIV LONDON (96.05), UNIV CALIF BERKELEY (88.44), STANFORD UNIV (87.86), UNIV CHICAGO (86.94), MIT (85.84), UNIV PENN (83.67), ERASMUS UNIV ROTTERDAM (80.25), DUKE UNIV (78.96)
7.ENGINEERING (1004 universities in total)	HARBIN INST TECHNOL (100.00), ZHEJIANG UNIV (92.58), TSING HUA UNIV (92.20), IIT (87.38), SHANGHAI JIAO TONG UNIV (86.92), XIAN JIAOTONG UNIV (84.75), SOUTHEAST UNIV (84.22), NATL UNIV SINGAPORE (84.21), NANYANG TECHNOL UNIV (83.38), MIT (82.10)
8.ENVIRONM & ENT ECOLOGY (586 universities in total)	UNIV CALIF DAVIS (100.00), UNIV CALIF BERKELEY (99.31), UNIV MINNESOTA (98.09), UNIVERSITY OF NORTH CAROLINA (97.44), WAGENINGEN UNIV & RES CTR (97.40), UNIV BRITISH COLUMBIA (94.82), UNIV QUEENSLAND (93.84), UNIV FLORIDA (92.88), UNIV OXFORD (92.82), SWEDISH UNIV AGR SCI (92.27)
9.GEOSCIENCE (377 universities in total)	UNIV COLORADO BOULDER (100.00), COLUMBIA UNIV (92.63), SORBONNE UNIV (COMUE) (89.45), UNIV WASHINGTON SEATTLE (89.10), UNIV PARIS SACLAY COMUE (88.52), CHINA UNIV GEOSCI (86.65), PIERRE & MARIE CURIE UNIV - PARIS 6 (84.88),UNIV CALIF SAN DIEGO (84.86), UNIV CALIF BERKELEY (93.89),UNIV LEEDS (82.52)
10. IMMUNOLOGY (380 universities in total)	HARVARD UNIV (100.00), UNIV LONDON (82.76), UNIV CALIF SAN FRANCISCO (79.77), UNIV PENN (77.69), JOHNS HOPKINS UNIV (76.28),UNIV OXFORD (75.11), UNIV WASHINGTON SEATTLE (73.63), EMORY UNIV (73.00), UNIV PITTSBURGH (70.53), SORBONNE UNIV (COMUE) (69.26)
11.MATERIALS SCIENCE (599 universities in total)	TSING HUA UNIV (100.00), NANYANG TECHNOL UNIV (98.05), MIT (94.25), UNIV CHINESE ACAD SCI (93.17), NATL UNIV SINGAPORE (91.03), STANFORD UNIV (87.59), CHINA UNIV TECHNOL (87.08), NORTHWESTERN UNIV (87.05), GEORGIA INST TECHNOL (86.64), FUDAN UNIV (86.52)

12.MATHEMATICS (194 universities in total)	KING ABDULAZIZ UNIV (100.00), PIERRE & MARIE CURIE UNIV - PARIS 6 (92.06),UNIV PARIS SACLAY COMUE (91.04), STANFORD UNIV (90.76),SORBONNE UNIV (COMUE) (90.23), UNIV CALIF BERKELEY (84,21), UNIVERSITY OF NORTH CAROLINA (83.09), PRINCETON UNIV (82.91), UNIV MICHIGAN (82.48),UNIV SORBONNE PARIS CITE-USPC COMUE (81.49)
13.MICROBIOLOGY (277 universities in total)	HARVARD UNIV (100.00), DUKE UNIV (79.73), WASHINGTON UNIV (79.05), UNIV LONDON (76.72), UNIVERSITY OF NORTH CAROLINA (75.96),UNIV PENN (74.70), MIT (74.66), UNIV OXFORD (74.18), ROCKEFELLER UNIV (73.86), CORNELL UNIV (73,68)
14.MOLECULAR BIOLOGY& GENETICS (426 universities in total)	HARVARD UNIV (100.00), MIT (85.49), UNIV CAMBRIDGE (76.75), UNIV LONDON (75.50), UNIV OXFORD (74.94), UNIV MICHIGAN (74.92), STANFORD UNIV (73.12), UNIV CALIF SAN DIEGO (72.78),UNIV WASHINGTON (72.12), UNIV PENN (70.86)
15.MULTIDISCIPLINARY (57 universities in total)	HARVARD UNIV (100.00), MIT (87.46), UNIV LONDON (83.45), UNIV OXFORD (82.97), STANFORD UNIV (77.43), IMPERIAL COLL LONDON (76.12), UNIV CAMBRIDGE (75.35), UNIV COLL LONDON (73.23), YALE UNIV (72.49), SORBONNE UNIV (COMUE) (72.45)
16.NEUROSCIENCE & BEHAVIOR (499 universities in total)	HARVARD UNIV (100.00), UNIV LONDON (89.35), UNIV COLL LONDON (86.34), UNIV CALIF SAN FRANCISCO (82.16), STANFORD UNIV (79.38), UNIV PENN (78.53), UNIV CALIF LOS ANGELES (77.78), JOHNS HOPKINS UNIV (77.54), UNIV TORONTO (76.66), WASHINGTON UNIV (76.61)
17.PHARMACOLOGY & TOXICOLOGY (567 universities in total)	HARVARD UNIV (100.00), UNIV LONDON (91.42), UNIVERSITY OF NORTH CAROLINA (86.61), UNIV N CAROLINA CHAPEL HILL (83.52), KAROLINSKA INST (82.14), UNIV COLL LONDON (80.65), SEOUL NATL UNIV (79.81), MONASH UNIV (79.50), UNIV EDINBURGH (78.66), UNIV CALIF SAN FRANCISCO (78.58)
18. PHYSICS (513 universities in total)	MIT (100.00), UNIV CALIF BERKELEY (98.17), UNIV PARIS SACLAY COMUE (97.84), STANFORD UNIV (95.69), UNIV TOKYO (93.79), UNIV CHICAGO (91.92), UNIV CAMBRIDGE (90.81), TSING HUA UNIV (90.71), PIERRE & MARIE CURIE UNIV - PARIS 6 (90.09), SORBONNE UNIV (COMUE) (90.08)
19.PLANT & ANIMAL SCIENCE (765 universities in total)	UNIV CALIF DAVIS (100.00), UNIV FLORIDA (99.62), GHENT UNIV (98.71), CORNELL UNIV (98.33), UNIV BRITISH COLUMBIA (95.00), MICHIGAN STATE UNIV (94.27), UNIVERSITY OF NORTH CAROLINA (92.82), UNIV TOKYO (91.45), WAGENINGEN UNIV & RES CTR (91.45), SWEDISH UNIV AGR SCI (91.23)
20.NEUROSCIENCE & BEHAVIOR (499 universities in total)	HARVARD UNIV (100.00), UNIV LONDON (89.35), UNIV COLL LONDON (86.34), UNIV CALIF SAN FRANCISCO (82.16), STANFORD UNIV (79.38), UNIV PENN (78.53), UNIV CALIF LOS ANGELES (77.78), JOHNS HOPKINS UNIV (77.54), UNIV TORONTO (76.66), WASHINGTON UNIV (76.61)
21.SOCIAL SCIENCE, GENERAL (881 universities in total)	HARVARD UNIV (100.00), UNIV LONDON (97.44), UNIVERSITY OF NORTH CAROLINA (80.55), JOHNS HOPKINS UNIV (79.92), UNIV TORONTO (79.40), COLUMBIA UNIV (78.78), UNIV WASHINGTON (78.66), UNIV COLL LONDON (77.91), UNIV OXFORD (77.61), UNIV MICHIGAN (77.58)
22.SPACE SCIENCE (91 universities in total)	CALTECH (100.00), HARVARD UNIV (95.66), UNIV CALIF BERKELEY (94.04), UNIV ARIZONA (84.55), PRINCETON UNIV (83.92), SORBONNE UNIV (COMUE) (83.74), PIERRE & MARIE CURIE UNIV - PARIS 6 (83.61), UNIV PARIS SACLAY COMUE (83.52), JOHNS HOPKINS UNIV (83.06),PSL RES UNIV PARIS (82.73)

Part of the results of world-class universities' first grade indexes ranking, and world-class universities the second grade indexes ranking are included in this ranking. The Chinese first-class universities and disciplines ranking are the substantial components in this world universities and disciplines ranking system. The Chinese Academy of Science and Education Evaluation's world-class and world-class disciplines ranking (2017-2018) did a lot Chinese first-class universities and disciplines ranking at the same time in order to know the difference and common points between Chinese first-class universities and world-class universities. All the results can be found in world-class and world-class disciplines ranking report (2017-2018). It is helpful for Chinese universities to know the education quality in a worldwide context. The evaluation results can serve as the pushing hands for Chinese universities to promote the world-class universities and disciplines' construction agenda.

6. Conclusion

Although there are different global universities rankings, the rankings' function, aim, methods, index system and the results vary to some extent. The Chinese Academy of Science and Education Evaluation's world-class universities and disciplines ranking insists on its own evaluation principles, and have its own characteristic. In accordance with the idea based in China with global visions, the ranking results will help China and other countries' universities to have an overall understanding of the world universities' developing status and trends. More importantly, the results will help the universities fully realize their status in a broad context, thus to know the gap between the individual university and the world-class universities. The ranking results would act as the guide for individual universities, even the educational authorities all around the world to carry forward the world-class universities and disciplines' building initiatives.

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HIGHER EDUCATION INSTITUTIONS (HEIs) REALIZING ITS EDUCATIONAL GOALS

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Abstract

The quality of education and effectiveness of higher education once overpoweringly based itself on reputation, resources, program outcomes and overall institutional characteristics. However, based on the quality and accountability in teaching and learning, it no longer fulfills these expectations. The essential factor of any institutions mission is based on student learning and its outcomes that functions as a component of institutional effectiveness. Accordingly, this study reviews the dimension of educational, institutional effectiveness consecutively with institutional goals. In the literature review, studies show how institutions have reviewed their criteria to clearly accentuate assessment of student learning outcomes to determine educational effectiveness. The assessment complements an institutional and educational outcome. This shows its clear relationship between and among faculty program or courses, curriculum and subject level goals and interrelationships among institutional goals. Therefore, the overall process of assessment is interlinked whether an institution opts to measure learner competency or institutional effectiveness; simultaneously both objectives and outcomes are explored. Higher education institutions have developed and are developing capacities for quality of education and to adapt to the commercial behavior becoming more innovative and self-regulating.

Keyword: educational and institutional effectiveness, higher education, student learning outcomes, sustainability and competency areas.

Introduction

In the globalized world, the need for sustainability and its development based on the needs of society, economy and environment has caused most higher education institutions (HEIs) to develop their vision, mission and goals on their country and individual society's needs. In other words most HEIs develop their goals for the benefit of developing society and creating sustainability to ensure that their learners and graduates not only capture the knowledge and skills but have the ability to contribute, communicate effectively and adapt towards the assimilating changes of the society (Johnston, 2007). Public policies and global economic forces in many countries have reformed the way HEIs operate and have changed overtime due to the changing needs of the society and international competition on cross border education. Thus HEIs have developed and are developing capacities to adapt to the entrepreneurial behavior becoming more innovative and self-regulating institutions (Knight, J., 2008).

Traditionally, quality of education and HEIs effectiveness deeply based themselves on reputation, resources and overall institutional characteristics reflecting on programme and student's grades. However, the quality and accountability in teaching and learning especially in undergraduate programmes no longer fulfills this expectation (Lindholm, 2009). The essential factor of any HEIs mission is based on student learning and its outcomes that serves as an

essential component of institutional effectiveness. However, the overall assessment processes assist and benefits HEIs to ensure that the mission and goals of the institution are clearly defined to the students, faculty and the public. The resources and programs are planned and coordinated appropriately and the assessment results are used for continuous improvement of student learning and institution advancement (Middle States Commission on Higher Education, 2005).

In most cases, results of student assessments are used to reflect on how well the HEIs vision, mission and educational goals are being accomplished. To achieve the mission and goals of the institution, the contribution depends on the effectiveness of the programs, curriculum and the services it provides to the faculty, students and the community. The planning and assessment cycle clearly defines the institutional goals, assessing achievement of these goals and using the assessment results for continuous improvement of the programs and its services (Middle States Commission on Higher Education, 2005). The assessment cycle includes planning, conducting, analyzing, evaluating and monitoring. Therefore the assessment reflects the institutional effectiveness based on the evaluation results and recommendations provided for continuous improvement (ibid).

The common question that is asked during accreditation of the HEIs "is the institution meeting the mission and goals set to achieve its educational purpose". It further defines what is being done and how well the institutions are doing and if it supports student learning which shows the fundamental institutional effectiveness. In accordance with the Middle States Commission of Higher Education, the fundamental component of student learning is the achievement of the institutions missions and goals that reflects institutional effectiveness. Therefore the assessment of student learning is mostly reflected as a third step of the four step teaching and learning cycle as in Figure 2. This involves the articulation and delivery of student learning and its outcomes. The articulation of learning is developed clearly reflecting the skills and knowledge the students are expected to attain at the end of the course; how to offer programs and courses that provide opportunities for students to achieve its learning outcomes and lastly assessing the learning outcomes based on what the students have achieved. These assessment results are used to further improve teaching and learning (Middle States Commission on Higher Education, 2005). The achievement of quality learning outcomes and success of education reforms are dependent on the quality of programs and its outline. A program of study or curriculum also serves as a fundamental concern affiliated between university, teaching staff and most importantly the students (Totté, Huyghe, & Alexandra, 2013)

Higher Education Institutions (HEIs) Realizing its Goals

Emphasis is placed more on the culture of "evidence" in the current trend of higher education in order to see the transformation of the academic and documenting its educational effectiveness where the process is as important as the outcome. Documenting educational effectiveness is an ongoing process of analysis and reflection that focuses on continuous improvement which benefits and enhances institutional efficiency (Lindholm, 2009). Whether it is academic or institutional assessment, two questions that primarily gauged *"are the students learning what the institutions want them to learn as per the educational and curriculum objectives and are the institutions learning from the student assessment reflection and or how are the institutions using these assessment results to enhance student learning ?*

Educational goals are broad categories which should include literacy, numeracy, competencies or general skills that link the framework of curriculum, teaching and student learning. Nevertheless, without breaking it down to more specifically measurable parts, student's accomplishment of these goals is difficult to assess. Learning outcomes fully describe the course or program goals and its mechanism to assess whether students have achieved and mastered the specific objective thus this is said to be an essential tool that gathers student

learning evidence (Lindholm, 2009). According to Western Association of Schools and College's (WASC), student learning evidence includes and covers core skills, competencies and knowledge established in the curriculum, includes multiple judgment methodologies to measure student performance and delivers multiple dimensions and information on student performance [Lindholm, 2009].

With the considerable rise of global pressures on sustainability and creating new generation with vision or empowerment and assumption of responsibilities for creating sustainable future, quality of education plays an ultimate role (Kanbar, 2012). Most higher education that is subjected to accreditation framework, creating assessment onto the accreditation process becomes vital as this ensures accountability of institutions and program to its students, faculty and public thus resources are coordinated in such a way to advance the institution and to achieve its program goals promoting continuous improvements (O'Neill, G., Huntley-Moore, S., Race, P., 2007). For successful implementation of educational assessment it involves a development process that reflects the views of students, staff and faculty members actively that allows institutional trust overtime for the integrity of the assessment process. Based on the importance of institutional mission and goals, assessment of students and institutions approach varies extensively. This is cost effective as it yields dividends where institutions tend to consider assessment measures such as graduation, surveys, retention, financial ratios and transfers (Lovell, C.D., & Kosten, L.A., 2000).

According to the comparative study of seven institutions by University of Michigan, student assessment efforts vary where institutions are decentralized compared to centralized institutions where the student assessment efforts are more uniform (University of Michigan, 2001). This is also subjected to variations based on the objectives of the institutions, its geographical locations, society needs, development goals of each nation and business requirements. This paper uses literature review to obtain the facts and arguments in relation to the institutional effectiveness and learner competency. The review defines, firstly, what the institutional assessment aims to involve and secondly what the assessment of educational effectiveness involves giving a wider thought on the ways they can complement and support each other.

Dimension of Institutional and Educational Effectiveness

Higher Education is an initiative facing exceptional changes where there is demand in terms of accessibility, diversity, innovations and global interactions leading students toward new educational understanding. The most significant challenges highlighted by College Student Educators International (ACPA) are the rising cost of higher education, accountability and proving better expectations for the employers [ACPA, 2010]. At the same time as in the globalized world, employers require graduates who are competent, innovative and those that are able to bring in change or adapt to the changes. Based on this context, the need for holistic educational performance is subjected to be taken into account to craft learner outcomes and how HEIs need to comply with minimum requirements in order to fulfill the graduate competencies. The report from ACPA & Student Affairs Administrators in Higher Education (NASPA) established scope and content of professional competencies as shown in figure 1 allows institutions to prosper within the current environment and projected future environment of the higher education (ACPA & NASPA, 2015). The report further stated that the importance of these competencies is significant in understanding how students learn and develop or attain the know how in business without failing to understand the core values of the educational profession.
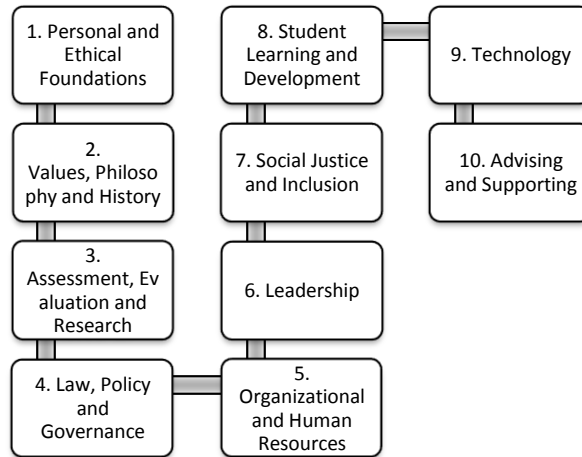
1. Personal and Ethical Foundations		8. Student Learning and Development		9. Technology
2. Values, Philosophy and History		7. Social Justice and Inclusion		10. Advising and Supporting
3. Assessment, Evaluation and Research		6. Leadership		
4. Law, Policy and Governance		5. Organizational and Human Resources		

Figure . Showing 10 competencies in comprehensive areas. Source:
(ACPA & NASPA, 2015)

These areas of competencies place necessary interpersonal skills, knowledge and attitudes that learners are expected to attain regardless of their specialization or field of studies. Where effective, learners are required to obtain proficiencies in areas of innovation, critical thinking, communication, leadership, literacy, numeracy and information technology which defines the work of institutions and places positive direction for future development individually and professionally (ACPA & NASPA, 2015).

Overall each competency area aims for knowledge, skills and disposition allowing learners and faculties to learn, develop and improve based on its recommendations. Disposition includes values, beliefs, attributes and attitudes (National Council for the Accreditation of Teacher Education (NCATE), 2008) or habits of mind that impacts one's action through filtration of skills, knowledge and beliefs in professional setting (Thornton, 2006). Each competency area has further refined outcomes as foundational, intermediate and advanced outcomes. At foundational level the learners must be able to demonstrate their ability to meet the minimum or basics of the listed outcomes of each competency area which also provides foundation or basis or starting point for intermediate and advance level and for future development within the competency area (ACPA, 2010). Each outcome supports the learner goals and learning outcomes and at the same time measures the educational and institutional effectiveness.

For successful implementation of educational assessment involves a curriculum development process that reflects the views of students, staff and faculty actively that allows institutional trust overtime for the integrity of the assessment process. For most of the competency areas, there is significant overlap of some aspects such as leadership, language that shows connections at multiple levels and emphasizes sustainability, globalism and cooperation (Middle States Commission on Higher Education, 2005). Overall integration of academic management and educational improvement accounts for institutional effectiveness. Student assessment data are used to influence and make decisions regardless of it being at the institutional management level, faculty or academic level as long as importance is placed that while making decision the assessment information is taken into consideration and used continuously (University of Michigan, 2001).

Linking Learner Outcomes to Educational and Institutional Effectiveness

Student learning outcomes define what the learners should value, know and be able to do by the end of their respective course or program accordingly. These outcomes are generally recognized by knowledge, skills, attitudes, values and behavioral outcomes. While these dimensions signify important aspects of student learning they are further divided into direct (skills, knowledge and behavioral) and indirect evidence (attitudes and values), nevertheless it is not viewed as less important than any other types of learning outcomes. In other words indirect evidence is mostly used in the analysis of direct evidence as argument while at the same time it enriches the institutions and faculty's non-judgmental of student learning and its educational practices (Lindholm, 2009).

A study from Scott, shows the seven stage approach to identify learner outcomes; (1) Learner profile, to map the learner's perspective as graduates with learner interactions; (2) Content of the course should be recognized by listing the skills and knowledge necessary to accomplish and that it is consistent with the requirements of sustainability; (3) knowledge and skills identified to reflect graduates ability to contribute to sustainable society; (4) desired learning outcomes are specified; (5) mechanisms and methodology of delivery is designed; (6) evaluation or audits planned to check programs compatibility; (7) final guide preparation for the course (Scott, 2006). Several institutions use student assessment for the purpose of internal improvement whereas some institutions practice it for the purpose of external accountability. However, measures of student assessment vary by institutions, faculties and nationality (University of Michigan, 2001). This reflects the overall student achievement and those maps to the educational objectives of the HEIs which link to the institutional performance.

The outcomes statements are representative of the overall aim of the competency area, however, they may not be fully representative (ACPA & NASPA, 2015). These outcomes are represented into three distinctive features that are foundational, intermediate and advance level outcomes. Now these outcomes are expected to be outcomes of the programs or subjects at each level. Individual learners meeting the full scale of outcomes within a level demonstrates proficiency at that particular level whether meeting in a singular level or meeting at manifold contexts. This may also differentiate between the learners as each may demonstrate foundational level proficiency at a later stage and achieve several intermediate or advance level outcomes for that competency at an earlier stage (ACPA, 2010).

These outcomes or learner assessment can be in the form of measuring competencies. Applying competencies in practice consists of various best practices rather than standardized approaches which are likely to progress overtime reflecting on the nature of competencies. Therefore, their application should be mindful of the HEIs unique mission, needs for the faculty and its professional associations (Middle States Commission on Higher Education, 2005). This also encourages the usage of competency areas for the related outcomes of self-assessing the institutions current goals and levels of proficiency and pursuing towards attaining and sustaining those goals. In order to ensure continuous improvement, the institutions should apply and adapt to the competencies whilst designing courses or other professional development practices. These competencies should also serve as a means of reviewing programs and setting subject level learning outcomes fulfilling the expectations of student learning (ibid). During student assessment and assessment of learning outcomes, the academic management which comprises of quality of education, program goals and strategic directions with resources and educational improvement such as teaching and learning innovation remain apparent (University of Michigan, 2001).

Student's project, course assignment and exams are direct measures of expected learning outcomes whereas indirect evidence pertains to self-perceptions, interpersonal and emotional intelligence of students and their view points. Even though indirect evidence does not provide direct answers to test whether students are meeting the specified learning outcomes

or no, it is still potentially useful information to the faculty and overall institutional performance (Lindholm, 2009). The most essential components of educational effectiveness in teaching and learning are created thoughtfully into direct and indirect methods of student learning and is reviewed, evaluated and assessed collectively as educational effectiveness for the deliberation of curriculum review and development (ibid).

On the wider range the student office would subsequently utilize these competency areas as a framework for quality education on international, regional and local level to meet the requirements of the cross border education and recognition of its qualifications. Each competency should be able to prove the work of all learners and promote its profession such as building outreach programs and career development aimed at the interest of learners thus reflecting the holistic student development and success in institutional effectiveness (ACPA & NASPA, 2015). The assessment determines to what extent the learners have demonstrated the proficiency upon completing the program and the expected learning outcomes are met. By use of this approach the HEIs not only provide evidence within but to external stakeholders as well as this information demonstrates the student learning evidence of accountability (Lindholm, 2009).

Analysis
HEIs Goal and Educational Objectives do complement each other

For HEIs, setting a clear statement on the institutional goals should include expected educational objectives and outcomes which allows to measure educational effectiveness. This educational effectiveness reflects on the undertaking and goals of the institution. This is in fact based on the requirements towards economic development, environment and social needs. Regardless of the higher education and regulating agencies, most HEIs usually have the freedom to design or conduct curriculum planning and development. These ultimately includes institutional guidelines, assessment activities, plans to develop and implement future initiatives, resources coordination, obtaining results that demonstrate institution and students achievement and plans to use assessment results to further enhance student learning and institution efficiency (Middle States Commission on Higher Education, 2005).
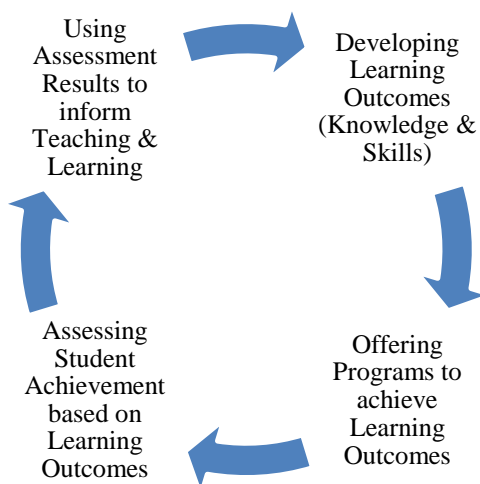

Figure 2. Four Step Teaching Learning Assessment Cycle. Source (Adopted from); (Middle States Commission on Higher Education, 2005)

In the process of evaluating and assessing institutions both the institutional and program level goals are assessed which shows how well the resources and learning objectives are defined thus reflecting whether the institutions is indeed achieving its goals or not. Based on the assessment results it is further used to improve the student learning and for the advancement of the institution. However, this includes the four cycle planning assessment process in parallel with the teaching learning assessment cycle as shown in Figure 2. The teaching and learning assessment cycle measures the program effectiveness at faculty level whether it's achieving its objectives and outcomes based on the assessment of student learning outcomes. The program effectiveness reflects the effectiveness of educational outcomes and objectives

set at an institutional level thus reflecting the mission and goals of the institution measuring institutional effectiveness. Therefore, the overall process of assessment is interlinked whether an institution opts to measure learner competency or institutional effectiveness; simultaneously both objectives and outcomes are explored.

The four step teaching and learning cycle can be further enhanced by incorporating the sustainability skills while developing the student learning outcomes and inclusion of the fifth step that is deemed important which is monitoring for continuous improvement as shown in figure 3.
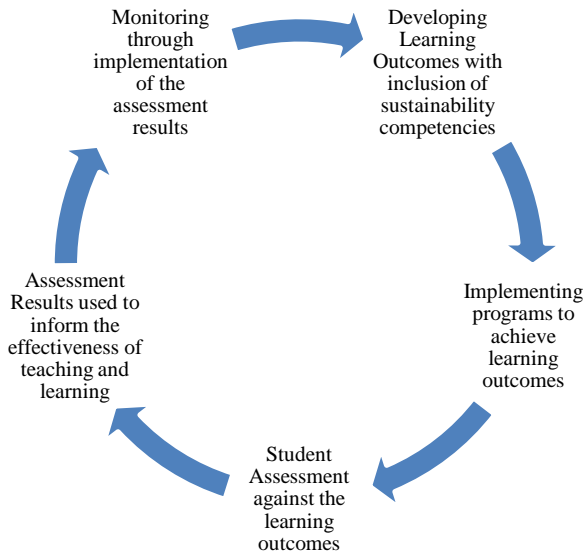

Figure 3. Showing the Five Step Process of Effective Teaching and Learning Assessment (Source: Author)

These sustainability competencies can be linked to the seven competencies introduced by the UNESCO education for sustainable development. The seven sustainability competencies required to develop learners or students general skills are critical thinking, strategic, collaboration, self-awareness, integrated problem solving, normative and anticipatory. How this need to be incorporated into the courses depends on how these competencies are incorporated into the curriculum or syllabus and used as measurable outcomes. Student learning is a dynamic aspect of the HEIs mission and goals therefore assessment of student learning plays an essential role and contributes towards the assessment of institutions effectiveness. Operational and effective assessments are systematic, cost effective and reasonably useful and accurate as well as continuous. It is useful since it assists faculty or colleges to make informed decisions on what is required to improve its goals and plans regarding courses or curriculum review and its services. However, these reviews should be done periodically in order to be useful. Assessments results reflecting institutional and educational outcomes are used in confidence making the required decisions as these assessments are reasonably known to be accurate and précise. However different assessment tools shall be applied but should clearly reflect the strategies and goals of the institutions, strategies and curriculum policy. In designing institutional mission and goals, the main element that the management and faculty look into is students and or learners as their products who are "*quality graduates*". Based on institutions mission and goals, services and programs or curriculum are developed therefore while institutions provide the services, their end products are supposed to be quality graduates. As mentioned above in the reviews student learning and development is one of the key competency areas of the institution therefore this reflects the educational objectives and its effectiveness that is interlinked with the mission and goals of the institutions.

Conclusion

To conclude a planned assessment is purposefully linked to institutional goals to ensure that all goals and plans are addressed which generally involves academic planning to ensure that those plans have effectively helped students or learners to achieve the program's key

learning outcomes. The assessment complements an institutional and educational outcome which shows its clear relationship between and among faculty program or courses, curriculum and subject level goals and interrelationships among institutional goals. In order for the institutions to be successful, they also need to think critically as well in order to develop programs and allocate resources wisely. Global economic forces and the need for sustainability education has transformed the way in which institutions operate and have changed overtime to the changing needs of the society and international cooperation. As part of continuous planning HEIs need to dovetail with society to ensure their graduates are well recognised and able to adapt to a peaceful and productive life.

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INDEPENDENT ASSESSMENT OF QUALIFICATIONS AS AN ELEMENT OF THE NATIONAL SYSTEM FOR EXTERNAL EDUCATION QUALITY ASSURANCE

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Absract

The article describes the system of activities on independent education quality assessment within the framework of the education quality concept "system quality – processes quality – results quality". It describes objects and tools of independent education quality assessment. National legal trends in the independent education quality assessment – public accreditation of educational organizations, professional public accreditation of education programs, assessment of qualifications – are presented. The article reviews the procedure for independent qualification assessment as an element of the system for external education quality assurance and as part of the complex approach towards education quality assessment based on integration of procedures for assessment on the institutional, program and qualification levels

Keywords: *education quality, independent education quality assessment, qualification assessment, professional public accreditation of education programs, public accreditation of educational organizations.*

Within the framework of the education quality concept "system quality – processes quality – results quality" (fig. 1) quality of the educational organization graduates education depends on the quality of an education program and quality of other processes of an educational organization, and this, in turn, is ensured by operation of an effective quality system in the educational organization, the main purpose of which is elaboration and implementation of preventive measures for quality assurance with respect to education programs and training of experts in the interests of all stakeholders. The quality system as an internal mechanism of education quality assurance helps educational organizations manage their education programs on the system level using the process approach and risk-based thinking, and along with that consider the needs and expectations of all stakeholders, including requirements of the labor market, and consequently improve quality of education, competitiveness of an educational organization and exercised education programs, train highly qualified experts able to address real production objectives.

In this article we use the term "educational organization" instead of the terms more conventional for the academic and scientific community such as "university", "institute", "higher education institution" etc., because the term "educational organization" is regulated by the current national legislation in the scope of education of the Russian Federation.
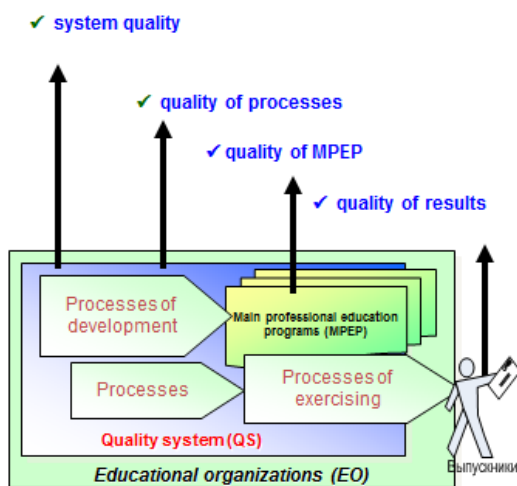

Figure 1. Concept of education quality

Beside the students, the parties interested in quality of education include their parents, educational organizations, states and societies, as well as employers which represent a target group interested in competitiveness of graduates, their conformity to the requirements set forth in professional standards and thus ability of an educational organization graduates to address real production objectives. So the target which educational organizations face consists in improving the quality and competitiveness of the provided education through development and implementation of education programs in accordance with the requirements of employers and the professional community and, consequently, in training of experts highly demanded on the labor market.

Currently in order to improve the education quality, and demonstrate the high quality level of educational programs, conditions for implementation of the education process and training of experts demanded on the labor market to the stakeholders, the educational organizations implement various mechanisms of internal education quality improvement both on the institutional and program levels [1-3], and undergo procedures of external independent education quality assessment [4-7].

Such independent education quality assessment allows educational organizations to boost the image of educational and scientific research services, enhance their competitiveness and competitiveness of their main education programs on the education services market, improve quality assurance and increase quality of the education results, enables them to receive certification of conformity of their graduates education level and conditions for education programs implementation to the modern demands of the labor market by the professional community and employers. Consequently, independent assessment of education quality adds value to an educational organization itself and to its customers and stakeholders, and represents a competitive advantage of an educational organization and a market mechanism of education quality recognition.

The system of activities on external education quality assurance (or independent education quality assessment) considering the concept "system quality – processes quality – results quality", which was previously mentioned in the article, represents the following fields of activity: assessment and certification of qualifications, assessment of education organization quality systems (QS) for the purpose of quality management system certification and public accreditation of educational organizations (EO), professional public accreditation of the main professional education programs (MPEPs) (fig. 2) [5-7].
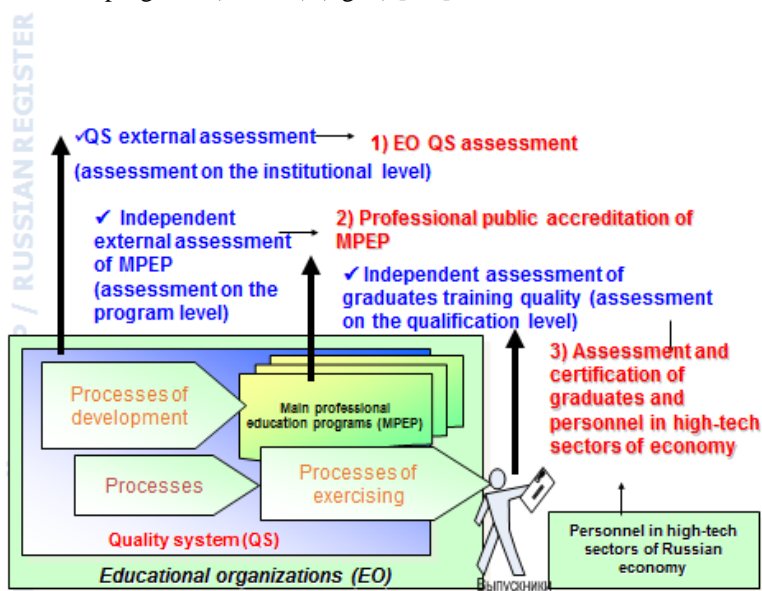

Figure 2. System of activities on independent education quality assessment

Subjects of independent education quality assessment, shown in fig. 2, are competencies of graduates, educational organizations and education programs. Tools which are used for assessment of these subjects may include:

- assessment and certification of qualifications: to assess competencies of graduates for conformity to professional standards or qualification requirements established by Federal laws and other regulatory enactments,

- public accreditation and/or certification of management systems: to assess educational organizations for conformity to the criteria and requirements of Russian, foreign and international organizations, requirements of national and international standards for management systems and education quality assurance systems,

- professional public accreditation: to assess education programs, i.e. recognize quality and level of training of the graduates which mastered such education programs in a particular organization performing educational activities as conformant to the requirements of professional standards, labor market requirements for professionals, workers and officers with relevant field of expertise.

The system of activities on external education quality assurance represented in figure 2 is currently relevant in terms of the system view and complex approach towards assessment of education quality on three levels – institutional, program and qualification [5-7].

Fields of activity and assessment tools within the presented system are nowadays exercised in the Russian Federation [7]. Certification Association "Russian Register" – an expert and certification organization included into the registrar of accreditation organizations of the Russian Federation, a member of foreign education quality assurance networks (INQAAHE, APQN, ENQA (affiliated status)), and in APQR (Register of Agencies of the Asia-Pacific Quality Network APQN), exercises these fields of external education quality assurance in its activity.

Within the framework of development of Russian Register international cooperation the above described system of activities on independent education quality assessment represents great interest for interaction with foreign education quality assurance networks and for conduction of activities on education quality assessment jointly with foreign partners of Russian Register – education quality assurance agencies, including Independent Agency for Accreditation and Rating, Kazakhstan, FIBAA (Foundation for International Business Administration Accreditation, Germany), Croatian Agency for Science and Higher Education, Croatia).

Activity on independent education quality assessment performed by Russian Register is correlated with modern tendencies in this scope, which are defined by the Russian legislation [4-7]:

- professional public accreditation of education programs (education quality assessment on the program level) and public accreditation of educational organizations (education quality assessment on the institutional level) are defined in the Federal Law No.273 "On education in the Russian Federation",

- assessment of qualifications (education quality assessment on the qualification level) is defined in the Federal Law No.238 dated July 3, 2016 "On independent assessment of qualification", effective as of January 1, 2017.

In accordance with the legislation public and professional public accreditation, and independent qualification assessment are performed on the voluntary basis. Data about public or professional public accreditation granted to an educational organization are taken into account for conduction of the state accreditation, which indicates that the results of education quality assessment are considered by independent organizations during its governmental assessment.

The main objective of this activity performed by the government is to regain prestige and relevancy of Russian education, training on applied qualifications, bind them to particular technologies represented on the market.

A significant role in arrangement and coordination of activities on independent education quality assessment, including professional public accreditation of education programs and independent assessment of qualifications, within the current Russian legislation is performed by the National Professional Qualifications Council under the Russian Federation President (NPQC) established in 2014 and chaired by the president of the Russian Union of Industrialists and Entrepreneurs. NPQC coordinates activities aimed at improvement of professional education quality: on alignment of federal state professional education standards

with professional standards; professional public accreditation of professional education programs; on development of the system for independent professional qualification assessment.

NPQC creates sectorial Professional qualification councils (PQC) on the basis of all-Russian and other associations of employers, unions and other organizations which represent and (or) unite professional communities. PQCs, the total number of which is currently 27, are the continuously operating authorities of the national professional qualifications system established for development and improvement of professional qualification systems for particular kinds of professional activity.

Federal Law No.238 dated July 3, 2016 "On independent assessment of qualification" became effective on January 1, 2017; it defines legal and organizational framework and procedure for independent assessment of qualifications of employees or persons aiming to perform particular types of activity, as well as legal provisions, rights and responsibilities of participants of such independent qualification assessment.

In accordance with this law independent qualification assessment is the procedure for confirmation of a candidate's qualification conformity to the provisions of a professional standard or qualification requirements established by federal laws and other normative legal enactments of the Russian Federation performed by a qualification assessment center.

Model of independent qualification assessment taken as the framework of the law is provided in fig. 3 [6].
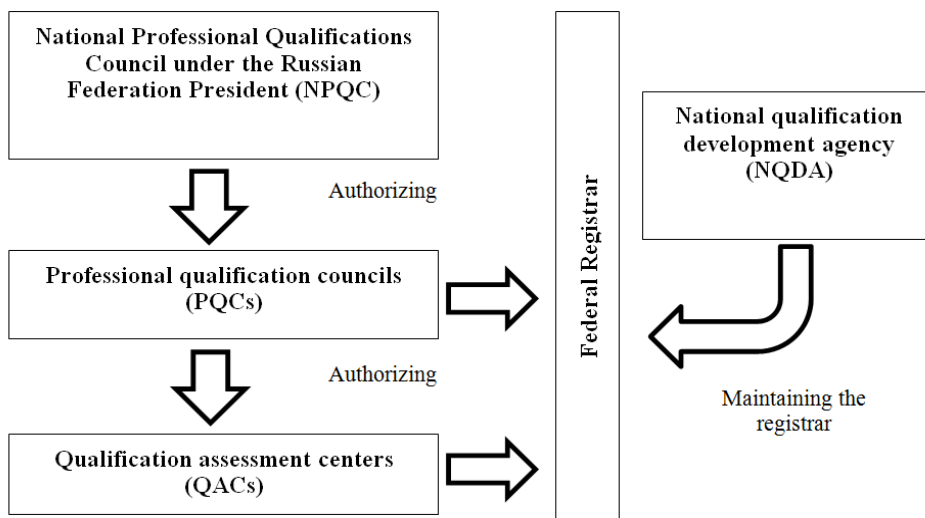

Figure 3. Model of the national independent qualification assessment system

In accordance with the provided model the independent qualification assessment system includes the following elements:

- National Professional Qualifications Council under the Russian Federation President (NPQC);
- Sectorial PQCs authorized by NPQC for arrangement of independent qualification assessment for a particular type of professional activity;
- Qualification assessment centers (QACs) authorized by PQCs to perform independent qualification assessment, i.e. conduction of professional examination of a candidate;
- National qualification development agency (NQDA) established in order to ensure activities on development of qualifications in the Russian Federation.

NQDA ensures organization, methodological, expert and analytical support of NPQC, PQCs and QACs activities, maintains the Federal registrar – an information resource for assurance of independent qualification assessment.

When it comes to the complex approach to the independent education quality assessment, and in order for an educational organization to receive a complex service on education quality assessment on the institutional, program and qualification levels, it is reasonable to integrate the procedures of public accreditation, professional public accreditation and qualification assessment.

Such complex approach to independent education quality assessment which takes into account both ENQA standards and guidelines, requirements of professional standards and the Russian legislation, and best practices of education quality assurance is used in Russian Register and described in various scientific publications [4-7].

When considering activities of Russian Register on qualification assessment within the system of activities on external education quality assurance, it seems appropriate to consider interaction with public organizations as well. Russian Register became a member of the all-Russian public organization – Independent partnership "ASMBEE of Russia". One of the main fields of activity of Russian Register stated within the organization which unites a significant number of representatives of small and medium business is establishment of the Committee on certification of qualifications and personnel – an advisory and consultancy body of "ASMBEE of Russia" on the issues of independent qualification assessment in the scope of small and medium entrepreneurship.

The purpose of establishing the Committee is support of small and medium business interests during their interaction with federal agencies, Russian national/regional sectorial unions of employers, professional community, professional qualification councils when developing and improving the national qualification system of the Russian Federation.

Targets for this Committee:

- Research of small and medium business problems which occur in the course of implementation of professional standards and development of independent education quality assessment practice, including independent qualification assessment in Russia;
- Analysis of opportunities for improvement of legal, normative and methodological framework used for development of the national qualifications system for the interests of small and medium business;
- Preparation of draft legal enactments on the issues of development of the independent education quality assessment system and the national qualifications system, and initiation of their approval by public authorities;
- Establishment of regional committees on certification of qualifications and personnel;
- Establishment of contacts on the issues of independent education quality assessment, including independent assessment of qualifications and certification of personnel with Russian governmental authorities, governmental authorities of the Russian Federation entities and municipal authorities, legal entities and individuals in Russia, as well as abroad; with youth organizations (All-Russian public organization "For high quality education" etc.), interaction with student self-governance authorities within educational organizations;
- Arrangement of events of various formats with specialized federal executive authorities;
- Fulfillment of commissions of "ASMBEE of Russia" management authorities;
- Cooperation on the issues of independent education quality assessment, including independent assessment of qualifications and certification of personnel with the Federal agency for the issues of CIS countries, fellow citizens living abroad, and on international humanitarian cooperation (Rossotrudnichestvo); with committees of the

Federal Assembly of the Russian Federation; with the Committee of "ASMBEE of Russia" on personnel for small and medium entrepreneurship and on education; with organizations performing research in the scope of education (Eurasian education quality assessment association etc.);

- Media representation of the Committee activities: provision of relevant and complete information for publication on the website of "ASMBEE of Russia", mentioning the Committee members as experts of "ASMBEE of Russia" etc.
- Promotion of best practices of independent education quality assessment, including independent qualifications assessment and certification of personnel on the basis of international standards.

Significance of establishing the Committee on certification of qualifications and personnel arises from the need to research the issues of small and medium business in the scope of training of personnel on vocations and professions demanded and focused on employment in small and medium entrepreneurship. Significance of establishing the Committee is also confirmed by the need to search methods for settlement of the identified problems based on the experience of Russian Register, including cooperation with the Federal Accreditation Service (Rosaccreditation), National Qualifications Development Agency, National Personnel Training Foundation, Russian Quality Organization and other authorities.

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