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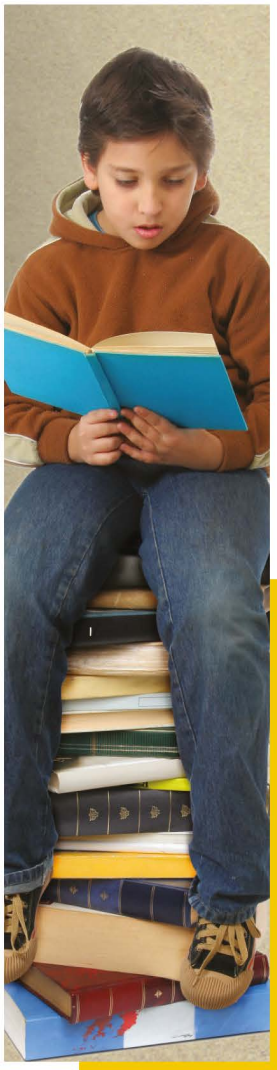

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UNIVERSITY QUALITY INDICATORS: A CRITICAL ASSESSMENT

STUDY

EN

2015

DIRECTORATE GENERAL FOR INTERNAL POLICIES

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CULTURE AND EDUCATION

UNIVERSITY QUALITY INDICATORS: A CRITICAL ASSESSMENT

STUDY

This document was requested by the European Parliament's Committee on Culture and Education

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Abstract

The 'Europe 2020 Strategy' and other EU initiatives call for more excellence in Europe's higher education institutions in order to improve their performance, international attractiveness and competitiveness. In this context the relevance of quality in higher education gained momentum. The Study examines separately two different quality approaches, quality assurance and rankings, and takes stock of latest achievements. This is followed by a critical analysis of these approaches in a comparative perspective. Recommendations and policy options for the Parliament are provided.

IP/B/CULT/FWC/2010-001/LOT1/C1/SC3 April 2015

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LIST OF ABBREVIATIONS

AAC-DEVA	Andalusian Agency of Knowledge, Department of Evaluation and Accreditation
AACSB	Association to Advance Collegiate Schools of Business
AAQ	Swiss Agency for Accreditation and Quality Assurance
ABEST21	Alliance on Business Education and Scholarship for Tomorrow
ABET Inc.	Accreditation Board for Engineering and Technology
ACA	Academic Cooperation Association
ACQUIN	Accreditation, Certifictation and Quality Assurance Institute
ACSR	Accredited Customer Service Representative
ACSUCYL	Quality Assurance Agency for the University System in Castilla y León
ACSUG	Agency for Quality Assurance in the Galician University System
AHPGS	Akkreditierungsagentur im Bereich Gesundheit und Soziales [German Accreditation Agency]
AKAST	Agency for Quality Assurance and Accreditation of Canonical Programmes of Studies in Germany
AMBA	Association of MBAs
ANECA	National Agency for Quality Assessment and Accreditation of Spain
ANQA	National Center for Professional Education Quality Assurance [Armenian quality assurance agency]
APQN	Asia-Pacific Quality Network
AQ Austria	Agency for Quality Assurance and Accreditation Austria
AQAS	Agency for Quality Assurance through Accreditation of Study Programmes
AQU	Catalan University Quality Assurance Agency
ARACIS	Romanian Agency for Quality Assurance
ARWU	Academic Ranking of World Universities
ASHE	Agency for Science and Higher Education
ASIIN	Verein zur Akkreditierung von Studiengängen der Ingenieurwissenschaften, Informatik und Naturwissenschaften [German accreditation agency]

BASis	Banco Nacional de Avaliadores
BIS	Department for Business, Innovation and Skills
BGU	US News & World Report's Best Global Universities
BMBF	Federal Ministry of Education and Research
CAPES	(Brazilian) Ministry of Education's Graduate Education Department
CEA	Certified Evaluation and Accreditation System
CEENQA	Central and Eastern European Network of Quality Assurance Agencies in Higher Education
cf.	confer
CHE	Centre for Higher Education
CHEA	Council for Higher Education Accreditation
CIQG CHEA	International Quality Group
CONAES	Brazilian National Higher Education Evaluation Committee
CPC	Preliminary Course Programme Score
CROHO	Centraal Register Opleidingen Hoger Onderwijs [Dutch Central Register og Higher Education Programmes]
DAAD	German Academic Exchange Service
e.g.	exempli gratia
EACEA	Education, Audiovisual and Culture Executive Agency
ECA	European Consortium for Accreditation in Higher Education
ECCE	European Council on Chiropractic Education
ECTS	European Credit Transfer System
EEA	European Economic Area
EFMD	European Foundation for Management Development
EHEA	European Higher Education Area
ENADE	Exame Nacional de Desempenho de Estudantes [National Student Performance Exam, Brazil]
ENAEE	European Network for Accreditation of Engineering Education
ENIC	European Network of Information Centres in the European Region

ENQA	European Association for Quality Assurance in Higher Education
EP	European Parliament
EQANIE	European Quality Assurance Network for Informatics Education
EQAR	European Quality Assurance Register for Higher Education
ERDF	European Regional Development Fund
ESG	European Standards and Guidelines for Quality Assurance in the European Higher Education Area
ESU	European Students' Union
etc.	et cetera
EU	European Union
EUA	European University Association
EUR-ACE	European Network for Accreditation of Engineering Programmes
EURASHE	European Association of Institutions in Higher Education
evelag	Evaluationsagentur Baden-Württemberg [German Accreditation Agency]
FIBAA	Quality Assurance Agency in Germany, Austria and Switzerland
FINEEC	Finnish Education Evaluation Center
FINHEEC	Finnish Higher Education Evaluation Council
FL	Flanders
FT	Financial Times MBA ranking
FTE	Full-time equivalent
GAC	German Accreditation Council
Guardian	Guardian University Guide
HE	Higher Education
HEI(s)	Higher Education Institution(s)
HRK	German Rectors' Conference
i.e.	id est
ibid.	ibidem
IGC	General Course Index

INEP	National Institute of Educational Studies and Research
INQAAHE	International Network for Quality Assurance Agencies in Higher Education
IQA	Internal quality assurance
IREG	International Ranking Expert Group
ITA	Institutional Thematic Assessments
JACA	Japan Association for College Accreditation
JIHEE	Japan Institution for Higher Education Evaluation
JUAA	Japanese University Accreditation Association
KMK	Standing Conference of the Ministers of Education and Cultural Affairs of the Länder in the Federal Republic of Germany
Leiden	CWTS Leiden Ranking
MEC	Brazilian Ministry of Education and Culture
MEXT	Japanese Ministry of Education, Culture, Sport, Science and Technology
MOOC	Massive Open Online Course
MSES	Ministry of Science, Education and Sports
MULTRA	Multilateral Agreement on the Mutual Recognition of Accreditation Results regarding Joint Programmes
n.d.	No date
NACIQI	National Advisory Committee on Institutional Quality and Integrity
NARIC	National Academic Recognition Information Centres in the European Union
NCES	National Center for Education Statistics
NEAA	National Evaluation and Accreditation Agency Bulgaria
NIAD-UE	Japanese National Institution for Academic Degrees and University Evaluation
NL	The Netherlands
NOQA	Nordic Quality Assurance Network in Higher Education
NQF	National Qualifications Framework
NUCE	Japanese National University Corporation Evaluation
NVAO	Accreditation Organisation of the Netherlands and Flanders

OECD	Organisation for Economic Cooperation and Development
OECD IMHE	Organisation for Economic Co-operation and Development Institutional Management in Higher Education Forum
PAIUB	Institutional Assessment Programme of Brazilian Universities
PhD	Doctor of Philosophy [doctor level degree)
PKA	Polish Accreditation Committee
pp.	paginae [Pages]
QA	Quality Assurance
QAA	Quality Assurance Agency for Higher Education [UK]
QS	QS World University Rankings
RDI	Research, development and innovation activities
REACU	Network of University Quality Assurance Agencies
RUCT	Register of Universities, Higher Education Colleges and Degrees
SER	Self-evaluation Report
SEU	Standards for the Establishment of Universities
SINAES	Brazilian National Higher Education Assessment System
SKVC	Centre for Quality Assessment in Higher Education Malta
THE	Times Higher Education World University Rankings
THE-QS	Times Higher Education–QS World University Rankings
TNE	Transnational Education
ToR	Terms of Reference
UK	United Kingdom
Unibasq	Agency for the Quality of the Basque University System
US	United States
USDE	Department of Education
USNWR	US News & World Report
ZEvA	Central Evaluation and Accreditation Agency Hanover

LIST OF TABLES

EXECUTIVE SUMMARY

This study titled "university quality indicators: a critical assessment" was jointly produced by the German Academic Exchange Service (DAAD) and the Academic Cooperation Association (ACA) on behalf of the European Parliament. It takes stock of the latest developments in higher education quality approaches, i.e. quality assurance (QA) and (global) rankings.

Scope and methodology

The research team conducted extensive desk research on QA and rankings as well as systematic text analysis of policy documents, websites and literature. Additionally, interviews with key stakeholders were conducted to validate and complete findings.

A first Chapter deals with the background of the Study. This is followed by Chapter 2, on the methodology. Chapter 3 is devoted to QA. It provides an introduction to the European context, a comparison of systems in eight EU countries and three non-EU countries across various dimensions, and examines the consequences of different QA systems plus upcoming trends and challenges. Chapter 4 covers rankings. After a brief introduction on the growing importance of global rankings, the analysis covers the institutional frameworks and methods of six global instruments, including the EU-sponsored U-Multirank, three major national rankings and a global business school ranking, before the intended and unintended impacts of rankings are discussed. Chapter 5 compares the differences and commonalities of QA and rankings. Chapter 6 contains the recommendations.

Emergence and growing importance of QA and rankings

QA and university rankings have existed for decades. However, external QA was historically a responsibility of the ministry in charge of higher education, and rankings existed only at a national level. Along with the massification of higher education, the first independent QA agencies emerged in the early 1990s. Global university rankings first appeared in 2003 when a team of researchers in China produced the Academic Ranking of World Universities to 'benchmark' Chinese universities against top universities worldwide. The growth of global rankings coincides with the advance of globalisation, the new role of higher education as a beacon for mobile capital and talents, marketization of higher education, and the advancement of digital media. As of 2014, ten global rankings were identified. The European response to this phenomenon is a multi-dimensional EU-funded university mapping and ranking project – U-Multirank. Both independent QA agencies and global university rankings have become prevalent today.

Purposes of QA and rankings

QA and rankings have fundamentally different purposes. The (stated) purpose of most rankings sampled for the Study is to identify 'excellence', in terms of the best higher education institutions (HEIs). In addition, rankings have often (unstated) commercial purposes. In contrast, the main purposes of external QA are to guarantee compliance with (minimum) standards and to support quality enhancement. By providing independent information, QA is to help building trust in higher education, which is expected to provide a better basis for recognition and thus to facilitate mobility.

Implementation of QA and rankings

The different purposes of QA and rankings are reflected in their legal and institutional framework. Global rankings are typically run by private companies and have no legal

consequence on HEIs. QA agencies are independent non-profit organisations and their work does have legal consequences. In most EU countries all study programmes are subject to external quality assessments; in some the agencies assess entire HEIs. A successful QA is often a requirement to operate a programme or an institution and, in some countries, affects public funding. Despite many differences between countries, the European Standards and Guidelines for Quality Assurance (ESG) provide a shared framework. The European Quality Assurance Register for Higher Education (EQAR) contains ESG-compliant national QA agencies. Most European agencies comply with the ESG which is, at EU level, considered a precondition for operating abroad. But legal and political hurdles at national level still hamper the emergence of a genuine European QA market.

The mainly private institutional set-up of global rankings in contrast to the public framework of QA is also linked to the quality criteria applied: Global rankings primarily apply research-related criteria for which data are available, whereas QA tends to focus on teaching and learning for which data have to be collected. The majority of global rankings use data from one single data broker. Since a similar data set on teaching-related indicators does not exist, QA criteria have a more qualitative nature. They are presented in a self-assessment report drafted by the HEI, verified and enhanced by an external peer review, and published in an external assessment report.

QA reports are hard to understand, while global ranking results appear to be easily readable. This is, however, a 'fake simplicity'. Several methodological shortcomings limit the usefulness of rankings in measuring 'quality' of higher education. These include the reliance on a single data source, the focus on publications and citations, the exclusion of certain academic fields as well as the limitation to English publications. Further, student surveys used for rankings are not representative. Finally, the differences between ranked institutions are often only marginal. To address these shortcomings different initiatives have been set up: The International Ranking Expert Group (IREG) has introduced a ranking audit, although the methodology of the audit itself is still in need of improvement. Another attempt is the creation of U-Multirank to do justice to the diversity of higher education. However, U-Multirank requires major resource input and its high degree of differentiation also stands in the way of easy readability.

Consequences and impacts of QA and rankings

Hard evidence is in short supply concerning the impacts of both QA and rankings. QA largely aims at securing compliance with minimum standards and quality enhancement. Negative consequences include the unattractive reporting and, in some cases, excessive bureaucracy, which may have a negative impact on the development of a quality culture. Rankings are viewed as creating a whole set of intended and unintended effects. Evidenced impacts of rankings have been found on student recruitment and admission, higher education marketing, reputation and legitimacy of HEIs, governance and operation of HEIs, and academic publication practices. Undesirable impacts of rankings include 'data massage' to improve the ranking position, homogenisation of higher education provisions, and academic drift.

Interrelation between QA and rankings

Despite their differences, there are tendencies of QA learning from rankings and vice versa. Some QA agencies apply quality ratings which indicate a quality that is better than required (e.g. 'excellent' or 'exceeding'). Thereby they enter the area of 'excellence', which rankings classically view as their habitat. Global rankings, on the other hand, are also moving in the

direction of 'multiranks', allowing users to adapt rankings to their own preferences. Noteworthy is also the introduction of the IREG audit, a QA instrument for rankings.

Recommendations

In the area of QA, seven recommendations (REC) have been formulated. REC 1 proposes the furthering of the European dimension in QA, inclusive of its instruments (ESG, EQAR, etc.). Likewise, and as a step beyond this, a European QA area should be developed step by step (REC 5). All QA efforts will ultimately fail if HEIs do not develop their own quality culture (REC 2). QA methodologies must also be constantly adapted to educational developments such as lifelong learning and massive open online courses (REC 3). The current trend in QA to move towards enhancement-oriented methodologies is welcome and to be reinforced (REC 4). QA reports should be understandable to informed lay persons (REC 6). We also recommend strengthening empirical research into the impacts of QA measures (REC 7).

With a view to global rankings in general, we are recommending to improve information on what the rankings measure and what they do not (REC 8) and to entrust this task to a to-be-created European mechanism for the QA of rankings (REC 9). We propose to simplify and scale down U-Multirank, in order for it to become sustainable (REC 10), to create a new business model for it for the time when EU support will have run out (REC 11), to enhance its visibility, possibly by cooperation with a media company (REC 12), and to conduct more research on globally comparable teaching-related indicators and the data collection for such indicators (REC 13).

1. INTRODUCTION

This study with the title "university quality indicators: a critical assessment" (in the following referred to as "the Study") was elaborated on the request of the European Parliament (EP)[1] by a consortium composed of the German Academic Exchange Service (DAAD), Bonn, Germany and the Academic Cooperation Association (ACA), Brussels, Belgium.

Background of the Study is the Agenda for the Modernisation of Europe's Higher Education Systems which is meant to contribute to the Europe 2020 Strategy. The Study addresses the second key area of this agenda aiming at the improvement of the quality and relevance of higher education. Regarding this background, quality assurance and rankings have been perceived as key instruments in the debate on the quality and relevance of higher education (HE) in the EU and worldwide.

The specific goal of the Study is to take stock of the latest achievements regarding *quality approaches in university education*. The Study outlines which external quality assurance systems as well as which major rankings are currently in place in higher education, how these systems and rankings operate and which consequences or impacts can be identified. Furthermore, the Study critically compares quality assurance and rankings. Based on the analysis, potential policy options with regard to quality approaches are presented.

The Study was implemented in the period December 2014 to April 2015 by a research team comprising staff members of DAAD and ACA as well as the director of the European Association for Quality Assurance in Higher Education (ENQA). Two high-ranking experts in the fields of quality assurance (Dr. Achim Hopbach) and rankings (Professor Ellen Hazelkorn) supported the elaboration of the Study by reviewing the methodology and research findings. Since quality assurance and rankings are two distinct approaches, a separate chapter has been devoted to each instrument. A further chapter compares the key findings in each area and draws a comparison of these distinct approaches.

Regarding the overall structure of the Study, chapter 2 presents and justifies the methodology to accomplish the objectives set out in the terms of reference. Chapter 3 presents the findings with regards to quality assurance, while chapter 4 encloses the results on rankings. Chapter 5 compares quality assurance and rankings and highlights both the major differences as well as similarities between these two approaches. Finally, chapter 6 formulates recommendations to the EP.

[1] Directorate-General for Internal Policies, Policy Department B – Structural and Cohesion Policies.

2. METHODOLOGY

The following chapter outlines the methodology of the Study. It was written on basis of the terms of reference (ToR) provided by the European Parliament (EP). The methodology was presented to and discussed with the EP at a kick-off meeting which took place in Brussels during the inception phase of the Study in December 2014. Recommendations and comments were utmost supportive for the proper understanding of the object of research and the specific methodological design. The methodology chapter is structured as follows: first, the rationale and objective of the Study will be presented. Secondly, the current state of research will be summarised before thirdly details of the methodology applied will be outlined. Finally, limitations of the Study will be pointed out.

Rationale and objective of the Study

The rationale of the Study is based on various European initiatives and strategies related to quality in higher education.[2] The 'Europe 2020 Strategy' aiming at smart and inclusive growth states, inter alia, the need for more excellence in the education sector. The pertaining flagship initiative 'Youth on the Move' strives to enhance the performance and international attractiveness of Europe's higher education institutions raising their quality, combining excellence and equity. Furthermore, the 'Modernisation Agenda of Europe's Higher Education Systems', elaborated by the European Commission in 2011, attributes high priority to the improvement of quality issues. All in all, the increasing relevance of quality in higher education provided even more attention to concrete actions, initiatives and regulations in the field of quality assurance - one of the main pillars of the Bologna reform. Next to quality assurance, global university rankings have become increasingly important worldwide in the past decade. The European Commission reacted to this trend with a feasibility study and a subsequent project, namely U-Multirank, launched in December 2012.

In the context of the increasing prominence of quality assurance and rankings, the goal of this Study is to take stock of the latest achievements in respect to quality approaches in university education. In line with the ToR, this stocktaking aims at the presentation of existing quality assessment and assurance systems, a critical analysis of these in a comparative perspective, a presentation of significant impacts (as far as possible) and an outline of potential policy options to support the development of transparent quality assessment and assurance systems in the future.

Current state of research

Before the methodological approach will be outlined, this section provides a short overview on existing research literature and other available resources for the Study, particularly on the key issues at stake, i.e. quality assurance systems and rankings. First of all, it may be stressed that there is hardly any literature dealing with quality assurance systems and rankings at the same time, not to mention comparing pertaining quality approaches. This is mainly due to the fact that most experts see ranking and quality assurance as independent fields that have very little in common.

Regarding quality assurance, the literature review revealed that substantial research has been produced on external quality assurance systems. In contrast, much less evidence is available on internal quality assurance. The same counts for impacts of quality assurance

[2] It should be noted that there is no commonly accepted definiton of 'quality' in higher education. Likewise, stakeholders have not yet agreed on a set of key indicators to verify to what extent quality has been achieved.

where little research effort has been undertaken so far. With reference to external quality assurance systems, there are country specific sources on the one hand as well as references covering more than one system, on the other. Of particular use for the Study have been official handbooks, manuals and other information provided by the national quality assurance agencies themselves, mostly available through their websites. These include, among other, specifications on legal issues, rules, procedures and methodologies of quality assessments conducted. In recent years, several comparative studies on quality assurance systems have been produced. Of particular relevance to this Study is the comparative analysis of quality audits in the European Higher Education Area (AQ Austria, 2014). This paper describes and contrasts quality assessments at the institutional level in twelve European countries. Another EU-wide study, funded by the European Commission, informs on the development of quality assurance in various member states and at the European level (Bischof, Gajowniczek et al., 2014). Based on an exploration of achievements, trends, good practices, weaknesses and future challenges, it gives recommendations for quality assurance at university, national and European level. The third survey of the European Association for Quality Assurance in Higher Education (ENQA) presents good practices in external quality assurance and identifies areas where progress is necessary (Grifoll, Hopbach, Kekäläinen et al., 2012). Other relevant references include stocktaking exercises in light of the Bologna Process (EACEA, 2012; EHEA, 2012j) or the Europe 2020 strategy (European Commission/EACEA/Eurydice, 2013). The last-mentioned sources provide not only information about the national level but also from the European perspective. In this regard, essential information could be derived from policy papers of the EU, the various ENQA reports and the European Quality Assurance Register for Higher Education (EQAR). Last but not least, the European Standards and Guidelines (ESG) compiled by European quality assurance stakeholders were instrumental for the analyses undertaken (ENQA, 2009b; ENQA, ESU, EUA et al., 2014).

With reference to rankings there is a wide range of research literature. 'The World-Class University and Ranking: Aiming Beyond Status' by Sadlak & Liu (2007) belongs to the most prominent ones. The essay collection provides diverse perspectives on university rankings and serves as a good starting point to the topic. There is quite some research criticising methodologies applied by rankings. In this regard, Erne (2007) questions both the reliability and desirability of bibliometric performance indicators. Despite critical reviews, global rankings have become an important part of the higher education scene. In this vein, Hazelkorn (2008) wrote a study about the influence of ranking on higher education leaders and their responses and reactions. A research article of Meredith (2004) treats the reasons why universities compete in ratings. Compared to quality assurance, evidence on impacts of rankings, both intended and unintended, is much richer. For example, Clarke (2007) analyses the impacts of higher education rankings on student access, choices and opportunities. Wilkins and Huisman (2012) look for impacts on recruitment and admission, the usage of rankings for marketing purposes and budget allocations to flagship programmes. Another information source for the ranking part of the Study is the website of the International Ranging Expert Group (IREG) concerning the ranking audit and the 'Berlin Principles on Ranking of Higher Education Institutions' (IREG, 2006).

Methodologies applied in the Study

The methodological features applied in the Study have been selected in due consideration of the state of research and the terms of reference (ToR) as well as the rationale and the objectives outlined above. Table 1 overleaf shows in which chapter the research questions stipulated in the ToR have been dealt with and which specific methodologies are applied.

Table 1: Research Questions and Methodological Approach

No.	Research question	Methodologies Applied	Chapter
1	Which quality assessment and assurance systems are currently in use in university education?	▪ Desk research ▪ Country level analysis and reports ▪ Validation of findings	Chapter 3 Annex 3
2	How can they [quality assessment and assurance systems] be comparatively assessed?	▪ Desk research ▪ Validation of findings by experts ▪ Comparative assessment	Chapter 3.2
3	Which are the most significant documented impacts of the implementation of different quality assessment and assurance systems?	▪ Desk research ▪ Country level analysis and reports ▪ Validation of findings by experts ▪ Semi-structured interviews	Chapter 3.3
4	What recommendations may be given for the further development of transparent quality assessment and assurance systems?	▪ Interpretation of own findings	Chapter 6
5	What are the concerns relating to standards of university education raised from both within and outside universities?	▪ Desk research ▪ Country level analysis and reports ▪ Validation of findings by experts ▪ Semi-structured interviews	Chapters 3.3/3.4 Annex 3
6	What efforts can be observed in recent years to develop improved education and quality assurance systems/indicators of universities (accreditation, ranking, etc.) both at national and supranational (European) level?	▪ Desk research ▪ Validation of findings by experts ▪ Semi-structured expert interviews	Chapters 3.1/3.4/ 4.1/4.4
7	What is the general institutional framework of university ranking? How most important rankings operate and what documented impacts can be observed?	▪ Desk research ▪ Text analysis of ranking descriptions ▪ Validation of findings by experts ▪ Comparative assessment	Chapters 4.1/4.2/ 4.3
8	In which way do existing national/international evaluation processes interfere with international rankings and what is their possible future interrelationship?	▪ Desk research ▪ Interview with ranking organisation ▪ Contractor's expertise	Chapter 5
9	Comparatively and critically assess different existing main ranking methods and highlight within this context in particular the features of U-Multirank EU project.	▪ Desk research ▪ Validation of findings ▪ Comparative assessment	Chapter 4

Selection of quality assurance systems and rankings

Given the limited availability of research literature on internal quality assurance[3], the Study concentrates on external quality assurance systems and related features at national and European level. Eight EU countries were chosen for in-depth analysis. Guiding principles for selection were the geographical distribution and the type of quality assurance approach. Thus, the sample includes two countries each from 'Eastern Europe', 'Northern Europe', 'Southern Europe' and 'Western Europe', as classified by the United Nations 'Geoscheme' (United Nations, 2013). As to the quality assurance approach, evaluation, accreditation and audit systems calling for different consequences were analysed. Additional criteria taken into consideration when setting up the country sample include the size of the higher education sector measured by student population, availability of data and other individual country characteristics. As required by the ToR, three major education markets outside the European Union were analysed for the sake of international comparison. The selected countries for the analysis of external quality assurance systems are Croatia, Finland, Germany, the Netherlands, Poland, Romania, Spain and the United Kingdom. Non-EU comparison is made with Brazil, Japan and the United States.

Rankings were selected according to five criteria. The rankings chosen were those with the highest perceived or documented impacts. This ensured that all major rankings are part of the analysis. Secondly, EU and non-EU rankings are included in the sample. Thirdly, the analysis considers both 'old' and 'new' rankings. As a fourth criterion the level of comparison (institutions, disciplines, systems; national and international) was chosen to illustrate their whole range but clearly focussing on the most dominant levels of the international debate, i.e. international rankings of institutions. Finally, rankings with a particular relevance for this Study were chosen. All in all, the following global rankings are analysed in detail: ARWU - Academic Ranking of World Universities (China), QS World University Rankings (UK), THE - Times Higher Education World University Rankings (UK), U-Multirank (EU), CWTS Leiden Ranking (The Netherlands) and Best Global Universities Rankings (USA). Other rankings analysed as comparative cases include three national rankings, namely CHE-HochschulRanking (Germany), Guardian (UK) and US News and World Report College Rankings (USA) as well as one discipline-focused ranking – Financial Times MBA Ranking (UK).

Desk research on quality assurance systems and ranking

In line with the research questions an analytical framework has been developed, specifying the dimensions to be analysed in the separate parts on quality assurance (chapter 3) and ranking (chapter 4). Following an introduction to the European context, research on external quality assurance is based on systematic descriptions of the national systems selected that resulted in comprehensive country reports enclosed in the Annex. The country reports follow a standardised structure focussing on the institutional framework, procedures and quality indicators applied and possible assessment outcomes. Consequences and impacts as well as trends and challenges are addressed in separate sections of the quality assurance chapter. The ranking chapter starts with a short introduction on the growing importance of global university rankings. Similar to the quality assurance part, the institutional framework and methods of rankings are analysed in detail with particular focus on quality indicators. Again, impacts are discussed in a separate section.

[3] 'Internal quality assurance' comprises the structures, processes and criteria in place within an higher education institution to guarantee the quality of the education it provides.

Desk research is based on available scientific literature and studies, including publications resulting from EU-funded projects and initiatives. Furthermore, national and European policy papers and legal documents were analysed. Other main sources consulted are the websites of ranking compilers and quality assurance agencies. Publicly available information obtained from the websites were coded and analysed systematically with reference to the analytical framework developed for the Study. Lastly, the authors' own insights and expertise into the topics fed into the Study.

Comparative assessment

Based on the desk research on quality assurance systems and rankings, comparative assessments were conducted. The comparative analysis in the quality assurance chapter is mainly based on the country level analysis (Annex 3) composed of the country reports and the overview table set-up on basis of the Bologna stocktaking reports. In addition, specific research literature was used to substantiate the results. With reference to the rankings considered, these are compared against several key indicators and displayed in a tabular format in chapter 4 (and Annex 4). In chapter 5, the Study provides a contrasting juxtaposition of the two quality approaches, based on the findings in chapters 3 and 4.

Semi-structured expert interviews

In order to collect first-hand data and information on perceived impacts, trends and challenges semi-structured interviews were carried out with quality assurance and ranking experts (see Annex 1). For the interviews a flexible approach was chosen by using semi-structured interview guidelines (see Annex 2). This allowed addressing the dimensions of the analytical framework less covered by desk research and discussing additional topics. Since in the field of quality assurance hardly any impacts have been documented, interviews were chiefly conducted with representatives from that field to fill this gap.

Validation of findings and quality control

To assure the overall quality of the Study and to avoid the inclusion of incorrect findings three feedback rounds took place. Firstly, high-level academic experts in the fields of quality assurance and rankings provided feedback on the methodology of the Study. Secondly, all the respective quality assurance agencies validated the findings of the country reports; some suggested corrections and most useful improvements. Thirdly, said high-level experts reviewed the draft report, specifically the chapters on quality assurance and rankings as well as the subsequent comparison included in chapter 5.

Limitations of the Study

Apart from the given time frame, the limitations of the Study concerned the availability of data and literature for selected research questions. Given that it was necessary to limit the sample for quality assurance systems and rankings as well as the number of interviews. Furthermore, the Study focused on major rankings and external quality assurance only. The assessment of joint programmes is becoming an important topic dealt with under other EU funded projects and initiatives. Evidence on impacts of quality assurance is scarce, for which reason interviews were conducted to receive some first information as to this. The European framework for quality assurance allows national systems to adopt significantly different approaches. Therefore, the comparison of systems was challenging and had to be conducted across a limited set of dimensions. This holds also true for the comparison of the overall approaches applied in quality assurance and ranking. Therefore, approaches were analysed separately before they were contrasted regarding their main characteristics and features.

3. QUALITY EVALUATION AND ASSURANCE SYSTEMS

The following chapter deals with the various external quality assessment systems in place in Europe. To begin with, the European context for external quality assurance and recent developments at the supranational level will be described (chapter 3.1). This is followed by a comparative analysis of the national quality assessment systems (chapter 3.2) based on the comprehensive country reports enclosed in Annex 3. Interviews with representatives from external quality assurance agencies (see Annex 1 and 2) provided most useful information as to possible consequences of the different systems (chapter 3.3) as well as challenges and trends in external quality assurance (chapter 3.4).

3.1. European context for external quality assurance

KEY FINDINGS

- The **massification and internationalisation of higher education** (HE) led to an increased need to ensure HE quality and gave rise to the establishment of independent quality assurance agencies (QAAs).
- A **European dimension to quality assurance** (QA) has been established with the Standards and Guidelines for Quality Assurance in the European Higher Education Area (ESG) and the European Quality Assurance Register (EQAR).
- The **ESG provide a shared framework** for good practice to guarantee the quality of educational activities of HEIs; the organisation of agencies' work and activities; and the external evaluation of agencies.
- The **EQAR** contains the European QAAs that have demonstrated their substantial compliance with the ESG.
- QA has a twin purpose of **accountability and enhancement**.
- Main QA approaches in the EU include **evaluation, accreditation and audit**.

In the following subchapter main characteristics of external quality assurance will be described from a European perspective. First of all a brief historical summary will outline the main reasons for setting up national and European institutions and co-operations. Subsequently two sections will provide information on the European Standards and Guidelines (ESG) and the European Quality Assurance Register (EQAR). Lastly, main approaches of external quality assurances will be presented and discussed.

3.1.1. European cooperation in QA of higher education

Historically, quality assurance has usully been a responsibility of the ministry in charge of higher education or of subject specific (professional) agencies. The massification of higher education in the 1980s and 1990, together with the increasing internationalisation led to the need to ensure quality of higher education in the changing environment in internationally acceptable and trustworthy ways. With increased student mobility, HEIs 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. In the early 1990s some European countries (Denmark, France, the Netherlands, and the UK)

established independent QA agencies.). At the same time Spain, Sweden, Finland and Norway started the planning and preparation process for the establishment of independent QA agencies (ENQA, 2010). In the mid-1990s the European Commission supported the "European Pilot Project for Evaluating Quality in Higher Education" (1994-95) for the establishment of evaluation methodologies and their testing in 17 countries and 46 institutions (ibid). The pilot project relied on four principles common to the four agencies already established: autonomy and independence of QA; self-assessment by the HEI; external assessment by peers and a site visit; and the publication of the evaluation report. The latter three, together with follow-up activities, have since formed the basic elements of a quality assurance cycle for all procedures used in the European context. In addition to forming the basic elements of external quality assurance, the project showed a clear need for intensified exchange of information between the agencies, in order to share good practice, discuss and find innovative ways to address existing challenges, and to share review experts. Consequently, ENQA, the European Network for Quality Assurance in Higher Education (from 2004 onwards an Association), was created in 2000 with the purpose of providing a platform for exchanges and to support the creation of the "European dimension". European collaboration has since been promoted strongly by ENQA, as well as other networks in quality assurance (e.g. the European Consortium of Accreditation, Quality Audit Network), through events, working groups and innumerable projects. The main stakeholder bodies in European higher education form the "E4 Group" (E4): the European Students' Union (ESU), the European University Association (EUA), the European Association of Institutions in Higher Education (EURASHE) and the European Association for Quality Assurance in Higher Education (ENQA). The collaboration of the E4 on quality assurance has supported a shared approach to quality assurance between the main stakeholder groups.

In addition to the essential work carried out by the associations on the development of quality assurance, collaboration has also moved forward through policy making channels. Importantly, quality assurance has also been one of the pillars of the Bologna Process since the beginning in 1999 (EHEA, 1999). Its importance has been reiterated over the years, in particular in 2005, with the adoption of the Standards and Guidelines for Quality Assurance in the European Higher Education Area (ESG), and in 2007 with the agreement to the establishment of the European Quality Assurance Register (EQAR), founded and managed by the E4 in 2008. In addition, in 2012 the Bologna Ministerial Conference recommended that all countries in the EHEA should allow any QA agency registered on EQAR to operate in their countries, thus opening up to a "European Area of Quality Assurance" (EHEA, 2012j). The work of the associations and specifically that of the E4 has fed into and continues to feed into the policy processes, and very importantly, to the implementation of the joint framework in different national contexts.

3.1.2. The ESG and the main principles for QA in Europe

The European Standards and Guidelines (ESG), adopted in 2005, were drafted by the E4. The ESG have been revised (to be adopted by the EHEA Ministerial Conference in Yerevan, in May 2015). This revision has involved an even larger group of stakeholders: in addition to the E4, Business Europe, Education International and the European Quality Assurance Register (EQAR) have been involved. The development of the ESG demonstrates that one of the main features of European quality assurance is that its design and implementation is highly stakeholder driven.

Once the ESG were adopted by the EHEA Ministers in 2005 (EHEA, 2005), implementation began in 46 member countries. The ESG provide a shared framework for good practice to guarantee quality of educational activities of HEIs; organisation of agencies' work and

activities; and the external evaluation of agencies. The ESG consist of three interlinked parts: Part I on internal quality assurance, Part II on external quality assurance, and Part III on quality assurance of the QA agencies themselves. In fact, the ESG introduced - in addition to the shared standards and guidelines - a peer review system for QA agencies at the European level. The impact of the peer review system has been significant. Firstly, it has encouraged the quality assurance agencies – and through them the HEIs – to align their procedures to the common European standards. Secondly, the peer reviews have supported the creation of trust between different quality assurance systems across Europe. ENQA membership and registration in the European Quality Assurance Register (EQAR) is subject to the successful completion of such a peer review (to be done cyclically every five years). In addition to creating a shared framework and supporting the convergence of procedures, the ESG have been instrumental in supporting the development of quality assurance procedures at the institutional level and the setting up of new independent quality assurance agencies. Intense collaboration at the European level between stakeholder bodies and within their constituencies has been essential for the implementation process.

The ESG are composed of generic principles and standards that can be applied to different types of quality assurance approaches and in different national contexts. They form the basis for a common understanding on quality assurance in Europe and support the building of trust across countries. They do not directly prescribe how an agency or an institution should organise its quality assurance, but provide guidelines for how standards may be implemented and their requirements reached. There is a strong belief in the value of diversity of methods and approaches and the ESG are designed so as to be applicable to all kinds of HEIs and QA agencies independently of the national context, the structures in place, the size and function.

The revised ESG are based on four principles, which form the distinctive feature of the European approach to quality assurance (cf. ENQA, ESU, EUA et al., 2014, p. 6):

- Higher education institutions have primary responsibility for the quality of their provision and its assurance. This means that external quality assurance needs to take account of and support the development of a good internal quality assurance system within the institutions.
- Quality assurance responds to the diversity of higher education systems, institutions, programmes and students. One model to be applied in all contexts and countries would be counterproductive to achieve the required mutual understanding and trust.
- Quality assurance supports the development of a quality culture. Without the full ownership of the stakeholders of the quality assurance processes they risk remaining an empty bureaucratic exercise which has little impact on the enhancement of quality.
- Quality assurance takes into account the needs and expectations of students, all relevant stakeholders and society. Quality assurance maintains thus the important function of guarantor and protector of the consumers' rights, while supporting constant enhancement.

In addition, the ESG underline that autonomous higher education institutions need as their counterparts independent quality assurance agencies. It is therefore a requirement at the European level – in all countries that wish to adhere to the commonly agreed ESG – that

quality assurance is performed by an agency that is free from the direct influence of the government, the HEIs themselves, students, or any other third party.

3.1.3. EQAR as a list of ESG compliant agencies

The concept of a European register of quality assurance agencies was presented to and welcomed by the EHEA Ministerial Conference in 2005 (EHEA, 2005). Even if with a different concept, in 2006 the European Parliament and the Council of the European Union also expressed their support of the idea to establish a European register of quality assurance agencies. (European Parliament and Council, 2006). The EQAR was founded by the E4 Group of stakeholders (see above) and started its operations in 2008.

EQAR is a free and openly accessible information tool on quality assurance agencies operating in Europe. The Register contains the European quality assurance agencies that have demonstrated, through a successful external peer review, their substantial compliance with the ESG, and have applied to be registered. Registration in EQAR is voluntary, and there are currently ESG compliant agencies who have chosen not to register or who are considering whether to re-register in the future. The main purposes in establishing such a Register were i) to provide clear and reliable information on quality assurance in Europe and to provide a better basis for mutual trust; ii) to facilitate the recognition of quality assurance decisions and thus to facilitate mobility; iii) to reduce opportunities for "accreditation mills" to gain credibility; and iv) to provide a basis for governments to authorise HEIs to choose any agency from the Register for their external quality assurance, if that is compatible with national regulations (EQAR, n.d.c). Quality assurance agencies are not members of EQAR. Rather, the membership of EQAR is composed of the founding stakeholder organisations, social partner members, and national governments in the EHEA countries (currently 32). The EQAR, other than ENQA, does thus not provide developmental support or exchange opportunities to QA agencies.

As mentioned above, one of the ambitions for EQAR is that all EHEA countries would allow their HEIs to choose, for the purposes of their obligatory quality assurance, any quality assurance agency registered on EQAR. Even if the EHEA Ministers committed to making this possible (EHEA, 2012j), this has not yet been realised. However, several countries are taking small steps towards opening up their systems to other European quality assurance agencies (see also chapter 3.2 below).

3.1.4. Main approaches of external QA in Europe

As has been indicated above, the European framework for quality assurance does not only allow for but encourages different approaches to quality assurance to flourish, as long as they are compatible with the principles and standards of the ESG.

The main types of approaches adopted by external quality assurance in Europe can be classified as:

- **Evaluation processes**, which are enhancement-oriented and focus on the strengths and weaknesses of a programme or an institution, usually resulting in recommendations for improvement.
- **Accreditation approaches,** which evaluate whether a programme or an institution meets a certain standard, usually leading to a yes/no decision.
- **Audits**, which focus on the assessment of the internal quality assurance system of an institution by underlining its strengths and weaknesses.

Quality assurance can have different purposes. The two most common are accountability and enhancement. Most quality approaches serve or attempt to serve both of the two, although with different focuses and priorities. It would, therefore, be a mistake to consider quality assurance as a form of "control" or "inspection". While HEIs need to demonstrate their accountability and show that certain basic standards are met, quality assurance will also aim at a constant enhancement of quality beyond minimum standards. Indeed, "a successfully implemented quality assurance system will provide information to assure the higher education institution and the public of the quality of the higher education institution's activities (accountability) as well as provide advice and recommendations on how it might improve what it is doing (enhancement)" (ENQA, ESU, EUA et al. 2014, p. 5). It is fundamentally important that quality assurance supports the development of a quality culture within HEIs and in the different contexts where all involved stakeholders are engaged in and feel responsible for the constant quality enhancement of the higher education provision.

Evaluation and accreditation can be applied at programme or institutional level. In the former, external quality assurance agencies look in detail at each programme provided, whereas in the case of institution-led QA, the focus is on the institution as a whole, and the responsibility for individual programmes is delegated to the institutions themselves.

According to the Bologna Process implementation report (EACEA, 2012), in the majority of EHEA countries, quality assurance was at the time of the report still concerned with granting permission to higher education institutions or programmes to operate on the basis of threshold quality standards. Only a minority of countries exclusively followed an enhancement-oriented approach.

The findings of the Bologna implementation report are in line with the findings of the ENQA "quality procedures project" of 2012 (Grifoll, Hopbach, Kekäläinen et al., 2012). ENQA found out that external quality assurance procedures focused most commonly on the programme level (either through accreditation or evaluation), followed at a significant distance by evaluation and accreditation of institutions, and by audits. This said, it is important to note that 90% of the agencies applied more than one approach and three-quarters of the agencies have recently changed or were in the process of changing their approach (ibid.). Considering the planned or recently implemented changes, it was possible to observe a trend from programme approaches towards audits and institutional evaluations, although this trend does not concern all countries, and in some cases there is a shift from an institutional to a programme approach. An argument in favour of institutional assessment would be that they allow for more flexibility and responsibility at the institutional level and – through the increased institutional responsibility - are expected to facilitate the creation of a quality culture at the institutions. Enhancement has become a priority to almost all QA agencies, independently of whether they carry out evaluations or accreditations.

Agencies also increasingly provide services of an advisory nature to institutions, policy makers and stakeholders. These activities are often not related to quality assurance in the narrow sense, and come in addition to the traditional basic activities of the agencies. A further task of the quality assurance agencies is to provide reliable and transparent information on the quality of higher education in their specific contexts.

3.2. Comparative assessment of external quality assurance systems

KEY FINDINGS

- The most common national quality assurance system in the EU is one characterised by a **single agency**. In some countries, there are several agencies.
- **Most European QAAs comply with the ESG**. At EU-level, this is considered a precondition for operating abroad. However, legal and political hurdles at national level limit further openness and the idea of a European QA-market.
- In most countries it is mandatory to accredit study programmes. **Institutional assessments have recently become more prominent.** Whether these will substitute programme assessments is not yet clear.
- Most **quality criteria** are similar for programme and institutional assessment. Programme assessments apply more content-related indicators; HEI assessments have a systemic approach and focus on internal quality management structures.
- Most systems apply an **ordinal measurement scale** to rate the different quality criteria as well as for the overall rating. In some scales the best value refers to compliance with a standard, in other scales a standard can be exceeded.
- **Stakeholder participation** is common in EU countries and a specific feature of QA in the region. It is higher than in major education markets outside the EU.
- Most common assessment outcomes are the **permission to further operate** a programme or an institution and, in some countries, impacts on public funding. In other countries, HEI and programmes simply receive recommendations for improvement.

This chapter describes and compares European quality assessment systems currently in place. For this purpose, systems are compared across three main dimensions, namely a) institutional and international dimension, b) methodologies of assessment and c) outcomes. Each of the three main dimensions under consideration analyses a number of sub-dimensions, as for example ESG compliance, stakeholder involvement and possible consequences of assessment.

Main data was gathered from the eight European country reports included in Annex 3a. These were compiled after desk research and validated by the respective national quality assurance agency. Further information is derived from the overview table compiled on basis of the Bologna Stocktaking Reports of year 2012 (Annex 3b). In the following, the three main dimensions are analysed one by one, always ending with a comparison of features of three major higher education markets outside Europe (Brazil, Japan and the United States) The country reports of the three non-EU countries form also part of Annex 3a.

Before any results of the comparative analysis are presented, it may be stressed once more that the European framework explicitly foresees a broad variety of systems and, thus, embraces different quality assessment approaches. Therefore, comparisons are possible only to a limited extent and should not lead to judgements of one system being better or more efficient than the other.

3.2.1. Institutional and international dimension

This dimension looks at the key players involved in quality assessments at the national and European level. It comprises three specific sub-dimensions:

- The institutional framework section provides details on the different types of agencies responsible for quality assessments in the various countries.
- The section on ESG-compliance analyses to what extent the agencies comply with the European standards and guidelines (ESG).
- Finally, "international openness" is investigated with reference to the possibility for foreign agencies to conduct legally mandatory assessments and with reference to the extent that national agencies can conduct such quality assessments abroad.

Institutional framework

The most common national quality assurance system in the EU is one characterised by a single agency. In 2012 this type existed in 18 of 29 EU systems (see Annex 3b).[4] Recent agency mergers resulted in an even larger number of single agencies today (cf. European Commission/EACEA/Eurydice, 2013, p. 41; Bischof, Gajowniczek et al., 2014, pp. 38-39). In many cases single national agencies have been established in the context of the Bologna process (EACEA, 2010, p. 24-25), either as a merger of existing institutions or as a completely new agency (European Commission/EACEA/Eurydice, 2013, p. 42). Despite the aforementioned trend, in some countries several agencies exist. In February 2015, this holds true for the EU countries of Belgium, France, Germany and Spain. As the country reports of Germany and Spain in Annex 3a illustrate, the rationale behind multiple agency systems varies: In Germany, some agencies work only for specific subjects or disciplines (e.g. engineering) while others cover all areas of study. Spain has one national and several regional agencies due to political reasons.

ESG compliance

The majority of European quality assurance agencies are full members of ENQA and registered on eqar (ENQA Secretariat, 2013a). In January 2015, quality assurance agencies from 19 EU countries were full ENQA members (ibid), while 32 agencies from 16 EU countries were listed in EQAR (EQAR, n.d.a). These agencies comply with the ESG. Likewise, many national legal frameworks take into consideration the ESG. A few quality assurance agencies have not demonstrated compliance for different reasons: some have been (re-)established only recently and, thus, could not yet go through an external agency review (Cyprus, Greece, Italy). Other systems are still in the process of establishing an ESG compliant agency (Slovakia, Latvia and Malta), while Luxembourg is too small to have its own agency. The Swedish National Agency for Higher Education failed to pass the ESG review due to the newly adopted system.

"International openness"

It is important to distinguish between obligatory and voluntary external quality assessments. In the beginning of 2015, in most EU countries obligatory quality assessments can only be undertaken by the national agency (cf. EQAR, 2014b, Chapter 2). Where foreign agencies can replace the national agency, conditions typically include EQAR registration and/or full ENQA membership. In addition, national quality assurance criteria need to be taken into account. Further, universities are free to undergo additional external reviews by foreign agencies. Such voluntary assessments are often used for marketing

[4] Belgium is divided into two systems, the French-speaking Community and the Flemish-speaking Community.

purposes. For instance, universities differentiate themselves by acquiring additional accreditation labels, or they gain international reputation by acquiring a label from a renowned international quality assurance agency.

In the past European quality assurance agencies operated mostly in their home country (cf. EQAR, n.d.a). German agencies have been operating in a number of other countries for quite some time. Other agencies such as the ones from Austria, the Netherlands and Flanders as well as Finland have also started to offer quality assessments abroad (cf. EQAR, 2014b, p. 25).

The verification of quality assurance agencies towards ESG compliance prepared the ground for a pan-European quality assurance area. In practice, barriers for a European "quality assurance market" relate to the governments' requirements to maintain control over their national system. This is the case particularly for countries where the assessment outcome has consequences for operation and funding. Furthermore, some countries have doubts if their national quality criteria can be properly assessed by foreign agencies (cf. Bischof, Gajowniczek et al., 2014, p. 91).

Comparison with non-EU systems

In Brazil there are several institutions involved in external quality assurance. Different responsibilities exist for the assessment of undergraduate and graduate programmes. In Japan, the Ministry of Education is responsible for initial (ex-ante) accreditation of new HEIs, whereas a single national agency is responsible for ex-post institutional assessments. In these regards, the Japanese system resembles the system in Poland. In the USA, there are about 60 agencies for programme accreditation which operate nation-wide, and several agencies for institutional accreditation which operate in a certain region. Legitimate agencies are recognised by an umbrella organisation. The feature of a centralised council certifying accreditation agencies can be also found in Germany, albeit without regional division.

3.2.2. Methodologies of assessment

This dimension describes what is being assessed and how the quality criteria are rated. In particular, the following sub-dimensions are investigated:

- The section 'object of assessment' describes whether programmes or institutions are reviewed by the agencies.
- The 'scope of assessment' analyses which quality criteria are applied in the review.
- 'Scale of measurement' addresses the question in what way the different quality criteria are verified (e.g. 'fulfilled' or 'not fulfilled').
- The last section deals with stakeholder involvement in the quality assessments.

Object of assessment: Programmes and institutions

The country reports and the comparative table in Annex 3 reveal that external quality assessments in a few countries investigate HEIs only, i.e. these do not examine study programmes individually. Examples include Finland and the United Kingdom (UK). In Croatia, only new study programmes are subject to programme accreditation, while running programmes are included in the institutional assessment.

In even fewer countries only programmes are object of the assessment. The only sample country with a focus on programmes is Poland, where the quality assurance agency

performs reviews of study programmes and of organisational units within HEIs (e.g. faculty) but not of HEIs as a whole.

"There seems to be a transition taking place, in which programme-level approaches are complemented with institutional approaches." (Bischof, Gajowniczek et al., 2014, p. 90). In that vein, most quality assurance systems encompass both programme-level and institutional-level assessments. Among the sample countries, the systems of Germany, the Netherlands and Flanders primarily require programme accreditation; however, in case a HEI applies for and successfully passes an optional institutional assessment, programme accreditation is no longer required (Germany) or a limited procedure will be applied (Netherlands and Flanders).

Institutional assessments may promise lower costs and less 'administrative burden' than programme assessments (cf. Wissenschaftsrat, 2012, pp. 143-146; Westerheijden, 2010, p. 31). However, while audits or system accreditations might give HEIs more institutional autonomy, they require effective internal quality assurance systems and a 'quality culture' within HEIs. Research highlighted barriers for the implementation of quality at the institutional level (cf. Kohoutek, Land and Owen, 2013; Land and Rattray, 2014) and the development of a quality culture[5] (Greere and Riley, 2014).

Scope of assessment

As already mentioned in chapter 3.1 the external quality assessment cycle is similar in all EU-countries and comprises four steps: self-assessment report of the HEIs, site-visit by peers to the HEIs, compilation of a review report by peers and follow-up activities.

Regarding the scope of assessment, many criteria are similar for both programme and institutional level. Specific to institutional assessments are quality indicators relating to an institutional strategy and an institutional quality policy as well as respective procedures for their practical implementation. Specific to programme assessments are detailed criteria on the concept and implementation of the particular programme. The following overview, based on the detailed findings in the country reports in Annex 3a, shows which criteria are usually assessed at institutional, programme or both levels:

<u>Quality criteria for assessment of higher education institutions</u>

- HEI strategy and institutional management, QA strategy and procedures, linkages between the internal QA unit and other units
- Clear definition of roles and responsibilities within the HEI
- Study programmes (conception, implementation)

<u>Quality criteria for assessment of institutions and programmes</u>

- Alignment to National Qualification Framework and legal requirements
- Student selection, examination (incl. verification of learning outcomes), support (e.g. financial) and degree award
- Resources: staff, facilities, equipment and finances
- Relevant research in teaching areas, linkages between research and teaching

[5] The term 'quality culture' should be understood as 'quality assurance culture' ; however, in practice, only 'quality cuture' is used. 'Quality (assurance) culture' refers to a situtation within an institution where all institutional levels support the idea that quality assurance processes and criteria do not form a bureaucratic exercise but are rather an important part of their work.

- Maintenance of high quality also in case of co-operations with partners
- Data collection, reporting, monitoring, linkage of internal quality to systematic improvement of education
- Information provision (students, public)

Quality criteria for assessment of programmes

- Contents of programme
- Expected learning outcomes
- Feasibility of programme, achievability of learning outcomes
- Other: equality, consideration of special needs of disabled students etc., special features of programmes (e.g. distance learning)

At the institutional level, there are means to describe and certify the distinct profile of a HEI by applying, mostly optional, additional quality criteria. Examples include the so-called "distinctive (quality) features" in the Netherlands and Flanders (e.g. internationalisation, small-scale and intensive education, entrepreneurship), assessed upon request and certified in case of positive outcome. In Finland, HEIs can select a feature central to its profile (e.g. sustainable development, wellbeing of students, entrepreneurship) and obtain feedback from the review team thereon. Similarly, in the UK each HEI has to choose a "thematic element" on which the review team comments on (e.g. student involvement in quality assurance and enhancement, student employability, digital literacy, etc.). In Croatia mobility and international cooperation are subject to mandatory assessment.

Scale of measurement

Two main types of ordinal measurement scales can be identified. The first group of scales is compliance-oriented and usually has three possible values. The best possible rating refers to a situation where quality standards have been met. The worst possible rating indicates that a particular criterion has not been achieved. In addition to a positive and a negative value, there is usually a third possible value such as 'partially fulfilled' or 'positive with conditions'. Examples from the case studies would be Germany, where a criterion is either 'fulfilled', 'partially fulfilled' or 'not fulfilled', Spain – 'positive', 'positive with conditions' or 'negative' – respectively some criteria in the UK, which can either 'meet UK expectations', 'require improvement to meet UK expectations' or 'do not meet UK expectations'.

The second group is excellence-oriented. In these ratings the best possible value refers to a situation where the criterion not only meets but exceeds the expected minimum standard. Examples from the countries analysed in detail are 'excellent' (Netherlands), 'outstanding rating' (Poland), 'high degree of confidence' (Romania), 'advanced (phase)' (Croatia, Finland), 'exceeding' (Spain) and 'is commended' (UK).

Stakeholder involvement

In most EU countries stakeholder participation in external quality assurance is relatively high. The main stakeholder groups – students and academic staff – are always involved in the external reviews and are in all countries part of the review team. In many but not in all cases, employers take part in the review. Additional members of the review teams in some countries are international peers. They take part in all assessments in Croatia, whereas in the UK their involvement has only been piloted. Innovative approaches to stakeholder involvement include the cooperation with the civil society. This is the case for Croatia, where an NGO representative is a member in the accreditation council of the national agency. In Greece, trade unions are board members of the accreditation agency (Grifoll,

Hopbach et al., 2012, p. 26). Mostly, though not always, reviewers receive training to get acquainted with the procedure and criteria employed by the agency.

Comparison with non-EU systems

In Brazil and the US, quality assurance assesses both programmes and institutions. In Japan, only HEIs are object of assessment. The criteria and indicators of the three international cases do not differ systematically from those applied in the EU. In some cases, criteria are explicitly referred to in one system (e.g. "Library and other information resources" in the US) but in others, they are integrated into an overarching dimension ("Facilities and equipment" in Europe). While in the EU systems monitoring and reporting mechanisms are more directed to the immediate stakeholders, especially students, the three non-EU cases explicitly refer to society as a whole in their institutional assessments. Specifically, these are "communication with the society" (Brazil), "information about teaching and learning made available to the public" (Japan) and "public disclosure" (USA). Indicators of financial resources for a programme or an institution seem to be more widely used in the three comparative cases. This may be founded by the fact that – in contrast to the United States - education in Europe is considered a public good. The additional assessment of thematic areas is also common in Japan. Currently, these include research activities, community engagement and – as in some EU countries – internationalisation.

Regarding the scale of measurement for the quality criteria and the overall evaluation, the Brazilian case differs from the EU by applying a numerical scale. Usually each item is rated from 1 (worst) to 5 (best). The overall score is a weighted mean of the single scores. This quantitative assessment allows calculating numerical scores for institutions and programmes, which are also used for rankings. However, this approach is not widely accepted in the academic community (Hoffmann, 2013, p. 653).

The Japanese system has two forms of assessment which have different ways of judgement. Accreditation assesses the compliance with minimum standards. Evaluations identify good practices and give advice as to how to improve in the future. Thus, some similarity to the Finnish system can be recognised, where the institutional audit provides recommendations on quality enhancement, without any impact on operation or funding.

Stakeholder participation is a topic much more discussed in Europe than in the three international cases. While valid information on the actual involvement of stakeholders in Brazil, Japan and the US could not be gathered within the scope of this study, the limited discussion and information available suggest that this is a distinctive "European" issue, which is currently less relevant elsewhere.

3.2.3. Outcomes

This dimension describes the possible overall outcomes of an external quality assessment as well as related consequences. Specifically, three sub-dimensions are examined:

- The section on possible outcomes of quality assessments discusses the different ways of presenting overall results in the review report.
- The second section looks at the concrete outcome consequences for the HEIs, programmes or students concerned.
- Finally, a short remark is made on the publication of outcomes.

Possible outcomes of quality assessments

The review report contains an overall outcome of the assessment, which is based on the ratings of the different quality criteria (see 3.2.2, scope of assessment). In some cases there are only two possible outcomes: positive or negative. Examples include initial accreditations of programmes in Croatia ('accredited' vs. 'not accredited') and institutional audits in Finland ('passed' vs. 'not passed'). Sometimes, a third option is a 'conditional' outcome (e.g. 'conditional accreditation' in Germany or 'conditionally positive' judgement in the Netherlands). In these cases, the HEI must demonstrate improvement in certain areas within a given time to remain certified. In practice, there have numerous cases where improvement could not be demonstrated and the programme could no longer be offered or the institution had to be closed.

In several countries the outcomes are presented on a more differentiated scale, similar to the assessment of the individual quality criteria. Examples of scales include 'excellent', 'good', 'satisfactory' and 'unsatisfactory' (Netherlands) and 'outstanding rating', 'positive rating', 'conditional rating' or 'negative rating' (Poland). In the case of the UK, there is no single rating but a rating in four different domains. Hence, similar to the ratings applied to the individual quality criteria, also the overall ratings can document a state of development which exceeds the minimum standards.

Consequences of different outcomes

As described in chapter 3.2.1 ("international openness"), additional quality assessments by foreign agencies are also used for marketing purposes. An example would be the so-called "Triple accreditation", which is an accreditation of business schools awarded by three business school accreditation associations – AACSB International, AMBA and EQUIS. The outcomes of these voluntary assessments have no legal consequence on the HEI. Only mandatory assessments are connected to legal consequences. In the majority of countries a positive outcome gives the HEI the power to operate, respectively to deliver a course which leads to a degree that is recognised by the national authorities. In these countries a negative outcome can eventually result in the withdrawal of these powers. Countries where HEIs would be able to operate, respectively to offer recognised degree programmes even in the case of a negative review include Finland and the UK. In Finland it is possible to fail the audit but, while it would harm the institution's reputation, the HEI could still operate legally. Similary, in the UK, it is possible that a HEI does not meet 'UK expectations' but would be allowed to deliver courses and maintain degree awarding powers.[6] These systems focus on recommendations on how to improve the HEIs and are therefore not linked to a permission to operate.

Another consequence is an impact on public funding. According to the analysis based on the 2012 Bologna Stocktaking Reports (see Annex 3b), in 15 of 27 systems (56 %) the outcome of external quality assessment had an impact on funding, while in 12 (44 %) a negative decision had no impact on funding. A similar pattern could be established when analysing the eight sampled countries: in four cases a link to funding was identified, in three cases there was no link, for Spain no such data was available. This shows that both options are common in the EU. In some cases funding also relates to student support in forms of grants and loans. For instance, in the Netherlands students are only eligible for student financing if their programme has been accredited.

Publication of outcomes

The ESG require external review reports to be clearly written and published (ENQA, 2009b, Standard 2.5). In practice, most agencies publish all reports.[7] Although reports are generally available online they are not always easy to find. Among the transparent examples, where outcomes can be easily accessed, is the UK agency, which publishes one page summaries with the option to download the full report.

The main target users of external quality reviews are naturally the reviewed entities themselves (HEIs and organizational units concerned) and the national authorities. Important secondary addressees are other HEIs, students, employers, and the society at large. In this context it may be noted that quality assessment reports – other than rankings - are difficult to understand for non-experts.

Comparison with non-EU systems

In Brazil, the overall evaluation result is an average score for each programme and institution, measured on a scale from "1 to 5" for bachelor and master programmes, and from "1 to7" at PhD level. Since the minimum score required for further operation is "3" the government is able to regulate the higher education market effectively, particularly regarding the growing private sector. Furthermore, there is an indirect consequence on public funding in the form of incentives for good performers, i.e. at graduate level the responsible quality assurance agency (CAPES) provides a flexible amount for scholarship programmes depending on the individual evaluation results achieved.

In Japan, quality assessments combine evaluations striving for quality enhancement through recommendations and advice (similar to Finland), and accreditations verifying the compliance with minimum standards needed for further operation. In case of non-compliance with standards the Ministry calls gradually for corrective actions which may lead to the closure of an institution if such actions are not properly implemented.

In the US the outcome is either 'accreditation' or 'no accreditation'. A positive accreditation statement is linked to benefits such as government funding, easy credit transfer and a good reputation which is expected to attract more students. Thus, quality assessments are governed by a market mechanism and undertaken by nearly all HEIs although this is not legally required.

In Brazil and Japan all evaluation results are published on the Ministries' websites. In the US, the assessment results are accessible in the "Database of Accredited Postsecondary Institutions and Programs". Hence, there is no significant difference to European QA in this regard, which should come as no surprise, as quality assurance serves the purpose of accountability in all analysed countries.

6 Some UK HEIs cannot award degrees themselves but their courses need to be validated by a HEI with degree awarding power.

7 Among the exceptions is Germany, where only reports with positive outcome are made available to public.

3.3. Consequences of external quality assurance

KEY FINDINGS

- The main **purposes of QA** include quality enhancement, guaranteeing minimum standards, information provision and the creation of trust, internationally.
- The research on impact of external quality assurance on the quality of higher education is methodologically challenging. Therefore, **evidence on the impact of QA has been mostly collected through surveys** and in the form of subjective perceptions, opinions and experiences.
- **Positive consequences** of QA include the prevention of education provision below minimum standards and the establishment of QA structures at university level supporting innovation, change and the creation of quality cultures
- **Negative consequences** of QA include, in some cases, excessive bureaucracy, which may have a negative impact on the development of a quality culture.

This sub-chapter aims to provide answers to the research question on documented impacts of the various quality assessment systems in place. Since impacts have hardly been documented yet, this section was entitled "consequences of quality assurance". In this context, the section starts with the main purposes of quality assurance and the challenges of impact evaluation in higher education. Thereafter existing information sources on consequences and impacts are presented and discussed. Finally, concrete examples for consequences and impacts are given for which the interviews conducted with representatives from national quality assurances agencies were utmost instrumental (see list of interviewees in Annex 1 and questionnaire in Annex 2).

3.3.1. The main purposes of quality assurance

The main global expectations of the higher education sector on external quality assurance may be summarised as follows:

- (Support to) the enhancement of quality in higher education
- Consumer protection and guarantor of acceptable or minimum standards
- Provision of independent and reliable information on HEIs and programmes and their quality
- Increased trust, which provides a better basis for recognition and thus facilitates mobility. External quality assurance may also support international collaboration (see chapter 3.1) through increased trust in the different systems.

Different elements on this list are given different priorities in the varying quality assurance systems across Europe, but by and large all systems attempt to have a positive impact in each of the mentioned areas, and the expectations on stakeholders seem to vary little between the different national contexts.

This section focuses specifically on the impacts in the areas of enhancement (and impact on quality assurance development) and the success of quality assurance to address the need for reliable information on the quality of institutions and programmes. Therefore, it does not look into the actual direct outcomes of quality assurance procedures, such as eventual

closures of sub-standard programmes or HEIs, or the impact of QA outcomes on funding etc. These elements are addressed in section 3.2.

It is important to note that it is not among the stated purposes of quality assurance to compare institutions or programmes to each other, but rather characteristically against sets standards or criteria, as well as to the former performance of the same entity. Consequently, quality assurance as such does not rank institutions or programmes.

3.3.2. The challenges of impact analysis in higher education

The real challenges, both for quality assurance agencies (representatives of the external quality assurance) and other stakeholders are to demonstrate to what extent and how the above listed objectives are reached and what are the impacts of the different quality assurance methods. As all systems turn towards underlining the importance of quality enhancement as their objective (in addition to and alongside with accountability), the task becomes even more complex, as the outcome of enhancement activities are less easily quantified.

What became clear from available literature as well as from the interviews carried out for the purpose of this report, impact analysis activities of European QA agencies are very few. If and when such analyses exist they are relatively new and impede long-term observations of changes (ENQA, 2015; EUA, 2013). Agencies attempting to measure or analyse the impact of their activities need to address several fundamental questions, such as to whom should external quality assurance produce impacts (the HEIs, the management, the teachers, the students, the labour market…), and whether there should be – and can be observed – a direct causal relationship between external quality assurance and teaching and learning quality, or rather between external quality assurance and the internal quality assurance processes (ENQA, 2015). While there is a Europe-wide agreement on the overarching standards on quality assurance, there is no single set of key indicators for quality. In fact, even in the revision of the ESG, a common understanding of quality assurance was formulated, while no definition of "what is quality" in higher education was provided (ENQA, ESU, EUA et al., 2014, p. 5). This was done however on the basis of a strong assumption that, while not easily verbalised in a short definition, an underlying common understanding on quality exists. However, without a verbalised agreement on what is to be measured, comparative assessments of enhancement and impacts are, of course, very difficult.

Beyond the methodological challenges related to impact analysis in a field where a range of factors influence the developments, two further main challenges can be observed: 1) several systems have only completed the first cycle of reviews, and this has not yet allowed for longitudinal analysis of implemented changes. This is the case for example in Croatia and in Romania (Dragojević, 2015; Sârbu, 2015); and 2) most quality assurance agencies lack the skills and resources (human and financial) to carry out such impact analyses, as it is not considered part of their mandate (AQ Austria, 2014, p. 26).

One important element of the European quality assurance framework is that it underlines the primary responsibility of higher education institutions themselves for quality and its assurance (ENQA, ESU, EUA et al. 2014). Following the principle of institutional autonomy, external quality assurance carried out by the quality assurance agencies should take into account, build upon and support the further development of the internal quality assurance mechanisms. Internal quality assurance means the set of methods, structures, processes and criteria that are put in place internally within an institution for the purpose of quality assurance. In the case of systems where the external quality assurance focuses on the

institutional level, programme quality assurance remains the task of the internal quality assurance system. In most cases, the internal quality assurance system has an important role in preparing the institution for the external evaluation. The implementation of recommendations and the follow-up of external quality assurance processes is also an important part of internal quality assurance. A large share of the implementation of a comprehensive quality assurance system depends therefore on the institutions themselves, which should put into place adequate and well-functioning internal quality assurance approaches. Leaving more responsibility to higher education institutions, if implemented properly, has the positive effect of bringing about diverse approaches, that will in the best cases have a close link to the institutional strategy and support the specific mission of each of them. On the other hand, institutional autonomy and high reliance on the internal quality assurance mechanisms means that in the cases of lack of improvement of quality the reasons for that cannot be easily attributed to the agency and its work, at least not alone. Likewise, effective internal quality assurance approaches may exist also in systems which lack a comprehensive and ESG compliant external quality assurance approach.

3.3.3. Existing information sources on consequences and impacts

While actual impact analyses are very few, and tentative, the ENQA report on Impact of Quality Assurance (ENQA, 2015) shows that quality assurance agencies collect a wealth of information and feedback from the institutions and programmes reviewed, from the related stakeholders, and from the review panels themselves. Such feedback often takes the form of satisfaction surveys on the services provided by the agency and on the procedures as such, or surveys assessing the expected and perceived benefits and outcomes of the process. While not addressing impacts through causal impact analyses, such information does provide input for the further development of the external quality assurance systems and gives indications as to the perceived benefits – as well as challenges – posed by the systems in place.

In addition to different types of feedback and satisfaction surveys, many quality assurance agencies carry out regular system-wide analyses. Such analyses collect and present the main outcomes of an entire review cycle, or the assessment of specific programme clusters, and can provide an overview of shared challenges, or main trends.

Some agencies organise stakeholder meetings to discuss the outcomes of the reviews (AQ Austria, 2014, p. 23). Such meetings offer a more flexible framework for providing feedback and allow for debate between the stakeholder groups, and for collecting qualitative - though possibly anecdotal - information on the impacts of the processes.

Second and further cycles of the QA processes, such as e.g. re-audits or outcomes of follow-up procedures themselves (AQ Austria, 2014, p. 23) can give indications on the impact of external QA, as changes can be observed between reviews and the extent to which the recommendations have been implemented can be analysed. The situation is more challenging to newer QA systems, such as in Croatia or Poland, where comparisons between review cycles are not yet possible (Dragojević, 2015; Kwiatkowska-Sujka, 2015). It should also be noted that many other things may also influence the course of affairs and a good audit may become ineffective if the HEI is not willing to act on it. Therefore, establishment of simple causal links is not always possible when comparing consequent review reports. Some more mature systems have reported on the challenge that when the QA expectations and methods become (too) well known, internal quality assurance mechanisms are well established, the potential of external quality assurance to promote change is reduced, and there is a risk that the processes become a mere technical exercise. This is why several systems are constantly changing some elements of their processes: not

only to respond to the developments in the HE sector as a whole, but also to provide constant stimuli to the HEIs (Jackson, 2015).

3.3.4. Examples of impact from the national contexts

External quality assurance is expected to have impacts at different levels: on the institutions and programmes, first of all, but also on the HE system of the country as a whole. In addition, feedback collected is also supporting the development of the agency's activities (AQ Austria, 2014, p. 23). In fact, QA agencies consider themselves as "learning organisations" and feedback is often used to modify methodologies, ways of working and the criteria used.

The interviews carried out for the purposes of the Study have provided interesting information on the observed and perceived impacts of quality assurance. Self-evidently, quality assurance methods in several countries have a very concrete impact on the HE system by weeding out sub-standard provision, either by closing the programme/institution, withdrawing or not providing degree-awarding powers, or by limiting available funding. In addition, "softer" approaches may have a very powerful impact if the lack of a quality label is considered a serious concern to the reputation of the institution. In addition, quality assurance processes provide usually very concrete recommendations for improvement, and, should these be followed by the programme or institution in question, it could be claimed that external quality assurance has had a positive impact on the improvement of the procedure.

Noteworthy impacts have been identified by the QA agencies. They mentioned the important role that external quality assurance has played in raising awareness as to quality and quality management. This has led to the professionalisation of quality assurance in HEIs. The AQ Austria report has observed that one of the important consequences of the first round of audits has been the establishment of internal QA units or quality assurance offices at the HEIs (AQ Austria, 2014, p. 25). It can be said thus that internal quality assurance becomes an important issue to the institutions through the implementation of external quality assurance measures.

Secondly, all of the interviewed agencies reported that HEIs see as one of the main benefits of the external review process its internal preparation phase. Indeed, most institutions (the interview revealed that in the UK all institutions agreed on this point) consider the preparation of the institutional self-evaluation report as the greatest benefit of the process. The preparation of the self-evaluation report offers the institution (or programme) an opportunity for institutional dialogue; it supports strategic development and opens up possibilities for new thinking. In fact, many ideas and suggestions for improvement emerge already at this stage of the process. As Newton puts it "where external QA or internal QA have succeeded in engaging staff in new thinking…. This may not have happened without QA!" (EUA, 2013, p. 9). In Croatia, where the external QA system is relatively new, an individualistic approach prevailed at the institutional level until recently. Since the establishment of external quality assurance, HEIs have started to establish QA units and strategic management of quality. In many cases when starting to work on the self-evaluation report, it was the first time ever that institutional actors in the institution sat together and talked about the institution. The preparation of self-evaluation reports gave already a lot of ideas on how to improve the institutional processes (Dragojević, 2015).

Thirdly, in addition to the internal debates and assessment of strengths and weaknesses that external quality assurance supports, HEIs underline also the importance of the peer

feedback and opportunity to discuss quality assurance with external experts as among the best elements of the external review process. This is the case in Finland, for example, but also in the UK (Kekäläinen, 2015; Jackson, 2015). An additional element is provided by the engagement of international peers. In Finland the use of international peers is considered very fruitful, as it provides new perspective not only to the reviewed institutions but also to the agency, and helps to identify some "blind spots" in the national system (Kekäläinen, 2015). This makes the international reviews worthwhile, even if they are also considered more labour and resource intensive.

In addition to these positive impacts, whether intended or unintended, external quality assurance agencies are aware and wary of potential risks posed by external quality assurance. First of all, the procedures are considered sometimes (if not often) overly bureaucratic and burdensome on the programmes and institutions. This has a negative impact on the attitudes towards quality assurance and is not supportive of the creation of a "quality culture". Secondly, often trying to combine both accountability and enhancement objectives within one procedure may lead to sub-optimal achievement of outcomes. In fact, in order to receive fruitful feedback for enhancement, the reviewed should feel confident enough to reveal its weaknesses and discuss those openly with the peers. If however their compliance with standards is being checked, it is more likely that the reviewed will wish to demonstrate its best side, rather than focus on the challenges. Thirdly, external quality assurance, while characterised by constant change, is also often accused of being too static, and not sufficiently flexible to respond to the needs of the changing higher education landscape. In fact, while attempting to enhance the quality of HE provision, QA may lead, through its rigidity in some cases, to blocking innovation and "market responsiveness" in the institutional context.

Through system-wide analysis external quality assurance can also have an impact on national policies by outlining specific features, needs or challenges related, for example, to the national legal frameworks.

3.3.5. Quality assurance reports as information source

There is little systematic information on the users and usability of the external quality assurance reports in the different national contexts. A recent publication by ENQA on the findings of the EQARep-Project (Bach, Dragojevic et al., 2014) highlighted that the main target users of the comprehensive reports are the reviewed entities themselves. It is therefore essential that reports are composed so as to provide clear and understandable, but also sufficiently detailed information on the evidence collected and the conclusions reached. The project found out that the reports value as an information source to other user groups as well as their actual use by these groups was limited. In fact, quality assurance reports are often long, using specialist language. Despite the requirement to publish them, they cannot always be easily found. Though access to reports is important, the project called for care in not sacrificing the usefulness of the reports to the main user groups in order to achieve a wider readership. Instead, a main conclusion was to improve the "transparency function" of external quality assurance reports. Brief summaries with core information on the review's outcomes should be provided by the QA agencies. If these are made available also on the websites of the HEIs, and provided in English, they are more likely to become an additional useful source of information e.g. to students, parents, or employers both within the national context and abroad.

3.4. Challenges and trends in external quality assurance

KEY FINDINGS

- Quality assurance must respond to the **changing higher education landscape** in order not to be become an obstacle for innovation and modernisation.
- **Common trends** include a stronger focus on internal quality assurance, more stakeholder engagement and further internationalisation of quality assurance.
- Agencies explore **more flexible and lighter procedures** leaving primary responsibility for QA within the HEIs and focussing on **quality enhancement**.
- External quality assurance may measure quality more and more beyond minimum standards through **distinct features or excellence labels.**
- **QA agencies broaden their scope of activities**, by taking up advisory activities and providing more enhancement and support activities.

European higher education is constantly changing and evolving. Its development is influenced by policy priorities at the national and European level, as well as by other overarching factors such as demography, immigration, global and national economy, the changing needs and dynamics of the labour market, digitalisation, as well as internationalisation and globalisation. All these factors influence institutional and national policies and strategies in higher education, and naturally, have an impact on quality assurance systems and the work of external quality assurance agencies. This section will look specifically at some developments in the field of higher education, and how quality assurance agencies are trying to respond to them. In addition, it considers some of the challenges related to the operations of the agencies in the changing environment. The first sub-section looks at the specific challenges that quality assurance agencies are faced with. The second sub-section considers the way in which external quality assurance is trying to respond to those challenges and which – if any – trends may be observed. The final sub-section is dedicated to the international cooperation and internationalization of external quality assurance, as a widely spread trend that is a source of specific challenges and opportunities.

3.4.1. Main challenges for external quality assurance

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 in times of scarce financial resources. Key developments in European higher education in recent years include lifelong learning, together with flexible learning paths and recognition of prior learning; e-learning, blended learning and massive open online courses (MOOCs); a student-centered learning approach including a special focus on learning outcomes as the basis of credit award and assessment; importance of innovation, including interdisciplinary programmes and collaboration with the worlds of industry and business; and internationalisation of education provision, including cross-border higher education and provision of joint programmes.

The interviews carried out in the framework of the Study as well as discussions that have taken place within the ENQA membership in the past few years have shown that - without exception - these issues have made it to the agendas of quality assurance agencies. It should be noted that while similar challenges and developments can be observed across Europe, their relevance and urgency vary between countries and HE systems. Independent of the specific focus areas chosen in the different national contexts, all agencies see the need to adapt and adjust to the changing ways in which higher education is delivered in Europe. As a way of example, from among the agencies interviewed for this report, Croatia and Finland have mentioned the importance of learning-outcome based approaches in the discussion for external quality assurance, while Poland, Spain, Croatia and the UK feel strongly the need to create better methods to address quality assurance of cross-border higher education. Quality assurance of joint programmes is especially topical for Poland and Croatia, whereas the evaluation of lifelong learning is a hot topic in Poland and in Germany. The Netherlands have signaled the quality assurance of MOOCs as well as the allocation of credits through flexible learning paths, as a consequence of the increasing trend to move away from traditional programme structures.

The above developments have made it necessary for external quality assurance to think about new ways of carrying out assessments and adjusting their criteria and methods to non-traditional forms of education: as programmes become interdisciplinary, flexible, composed of credits gained outside of formal education, or delivered entirely or in part in another country, the traditional methods and criteria may not be adapted for their quality assurance. For example, the staff-student ratio or the number of square meters per student may be irrelevant for distance and elearning programmes, or the requirements on the number of credits per main subject may not fit the concept of balanced interdisciplinary programmes. It is strongly felt by the institutions and the agencies that the QA agencies, together with the institutions and eventually national authorities, need to address these issues ast and adequately in order for QA not to become an obstacle for innovation and modernisation of higher education, but rather their promoter. ENQA as the association of quality assurance agencies in Europe has established, upon request of its member agencies, several working groups to discuss, evaluate and share good practice on how these issues should and could be best addressed in the different national contexts and by different external quality assurance approaches (ENQA, 2015). In most cases the work is still in progress. The revision of the ESG has also responded to the trends in European higher education (ENQA, ESU, EUA et al. 2014), e.g. by reference to student-centered learning, cross-border higher education and joint programmes.

All quality assurance in Europe is oriented to the twin purpose of accountability and enhancement and finding the right way to balance the two is a constant challenge for all quality assurance systems (Grifoll, Hopbach, Kekäläinen et al., 2012; AQ Austria, 2014, p. 27). Indeed, as the revised ESG phrase it: "At the heart of all quality assurance activities are the twin purposes of *accountability* and *enhancement*. (…) A successfully implemented quality assurance system will provide information to assure the higher education institution and the public of the quality of the higher education institution's activities (accountability) as well as provide advice and recommendations on how it might improve what it is doing (enhancement)." (ENQA, ESU, EUA et al., 2014, p. 5). While this "twin purpose" is now embraced and taken on board by quality assurance agencies across Europe, external quality assurance will constantly balance between the two sides of the QA "coin". So as to receive useful feedback to support enhancement, an institution or programme needs to be sufficiently open about the challenges it faces and be willing to demonstrate, at least to a certain degree, also its weak points. If, however, the same procedure needs to check on compliance with required standards, the institution (or programme) is likely to want to

showcase its best side to the reviewers. Consequently the benefit of the feedback for enhancement may be limited.

The involvement of stakeholders in quality assurance processes has always been a key feature of European quality assurance (ENQA, 2009b). However, in many countries the full involvement of stakeholders, and in particular of employers, is still very challenging. In addition, several agencies have reported on the challenge of engaging the academic community in quality assurance (Leetz, 2015; Sârbu, 2015). The challenge of creating a "quality culture" is addressed also by higher education institutions themselves (EUA, 2011). In order to respond to this challenge, the quality assurance agencies try to ensure that their processes do not become overly bureaucratic or a mere "paper filling and box-ticking" exercise that fails to engage the institutional actors in enhancement-led thinking and self-analysis. If quality assurance is seen as a burdensome and useless procedure it will not be able to reach its objectives.

3.4.2. Main trends in quality assurance in Europe

Europe, whether as the European Union, or the European Higher Education Area, is composed of far too many and far too diverse systems to be able to provide clear trends on where quality assurance in Europe is – as a whole – heading. In fact, also due to the very different stages of development of (external) quality assurance in the different European countries, some divergent "trends" can be observed. The development of quality assurance may be described as a curve that moves, in several cases, towards more control in early phases of development and then to lesser control as the system matures. It may also lead to a pendulum movement, where the system moves back and forth between more and less control. While determining common "European trends" may not be possible, some common features can be observed.

According to the ENQA "Quality Procedures Project" (Grifoll, Hopbach, Kekäläinen et al., 2012), European QA agencies, while showing a high level of methodological variability, seem to converge towards four main forward-looking strategies: 1) greater attention to the institutional review and optimisation of review processes to reduce "red tape" – or in other words, giving more importance to internal quality assurance methods and primary responsibility of HEIs for quality assurance (ENQA, ESU, EUA et al., 2014; Sarbu, 2015); 2) need to increase internationalisation; 3) wish to identify excellence in higher education, encourage innovation, and disseminate good practice; and 4) intensifying monitoring of results and follow-up of QA activities in order to better measure their impact and the quality enhancement. There is also a clear trend to underline the enhancement purpose (and potential) of quality assurance, which has also contributed to the move from "assessing performance of HEI to assessing the internal quality management system (from accreditation to evaluation to audit)" (AQ Austria, 2014, p. 27). Agencies are becoming more aware of the role that quality assurance can have in implementing higher education policies and reforms, and not least on the potential of quality assurance to collect and provide data to support policy making. Indeed, according to the QPP report (Grifoll, Hopbach, Kekäläinen et al., 2012), the majority of European QA agencies have in recent years extended the scope of activities from traditional quality assurance activities to providing (additional) consultative and advisory services, such as training sessions, advice on QA methods to HEIs, and input to policy making. The information and knowledge that QA agencies possess as a result of the execution of QA and accreditation tasks put them in "a privileged position as think tanks" (Grifoll, Hopbach, Kekäläinen et al., 2012, p. 6), and several agencies are taking this up.

Some systems combine institutional with programme assessments. Institutions with high confidence may have lighter procedures for their programme assessments than those with a lower degree of confidence. In addition to the stronger focus on the primary responsibility of institutions for quality assurance, there are also some other reasons that may have contributed to this shift. In Spain, for example, there is a need to consider the financial efficiency of the employed systems, without compromising the quality and consistency of the procedures (Llavori, 2015). Also the maturity of systems seems to allow for and facilitate the move from "control" to "enhancement" as higher degree of trust in the institutions' own quality assurance methods is achieved (Dragojević, 2015). There is also awareness that the burden of external quality assurance on institutions may need to be alleviated: a frequent feature in audit approaches in Europe is the will to support "interaction of different procedures for mutual benefit maximisation and avoiding overloading of procedures and burden to HEIs" (AQ Austria, 2014, p. 27; Annex 3a, Country Report Netherlands). The UK has introduced a risk-based approach, which is intended to allow for greater flexibility in the review process and the assessment cycle (Annex 3a, Country Report UK). It should be noted that – at least in several national contexts - the stronger focus on internal quality assurance will require substantial capacity building activities at the HEIs. A lighter external quality assurance process will be sufficient only if it is coupled with robust internal quality assurance approaches.

External quality assurance recognises the importance of taking better into account institutional diversity and accepts that, in order to maximise the positive impacts of QA, it may need to be more flexible and introduce some tailor-made elements into the procedures. Agencies are also trying to find ways to enable institutions to demonstrate their achievements beyond the "minimum standards" e.g. through different distinct features (Annex 3a, Country Report Netherlands) or excellence labels (Brusoni, Damian, Grifoll Sauri et al., 2014). According to Dittrich, the concept of excellence has made it to the quality assurance agendas likely also due to the emergence of higher education rankings (ibid., p. 4).

As has been stated before, one typical feature of European quality assurance is the strong involvement of stakeholders. The revisions to the ESG (ENQA, ESU, EUA et al., 2014) show that focus on a meaningful engagement of stakeholders has grown in importance over the years. The engagement of students in quality assurance, in all its stages, has been further underlined in the revised ESG (ESG 2014): in 2005 student engagement was considered a desirable feature for quality assurance - an "added bonus", or good practice. By now, however, the engagement of students in quality assurance has become a must: indeed, it will appear as a formal requirement (a "standard" rather than a "guideline") in the revised ESG (ENQA, ESU, EUA et al., standard 2.4, p. 15). It should be noted that while by now an almost self-evident feature across Europe, the engagement of students in quality assurance is not widely practiced in several other world regions.

Across countries – and years - quality assurance seems to be in constant change. This is natural considering that QA of higher education is and needs to be deeply embedded in the higher education sector and respond fast to the changes and challenges. It is also characteristic for quality assurance agencies to consider themselves as "learning organisations" and thus to respond, in their own activities, to the requirement of constant enhancement. In addition, several agencies, in particular in well-established systems, have expressed the need to change their criteria and processes regularly in order to maintain the benefits and enhance the impacts of external quality assurance, reducing the risk of turning external QA into a "routine activity". Among certainly many other countries, Finland, the Netherlands, and the UK are all discussing currently how the future quality assurance

procedures in their countries should look like in order to maintain and enhance their usefulness and impact on HEIs (Aerden, 2015; Jackson, 2015; Kekäläinen, 2015).

3.4.3. The challenge and trend to internationalise

There is a clear European dimension to quality assurance and the international dimension of external quality assurance has gained significant importance in the past decade. This has been, of course, boosted by the internationalisation of higher education in general: student and graduate mobility has led to the need for better recognition procedures; the establishment of joint programmes requires specific QA approaches; and the QA of the increased offer of cross-border higher education can be addressed only through international cooperation. The ESG provide the framework for international cooperation in Europe. As institutions, agencies and countries improve their compliance with the commonly agreed standards, trust in each other's systems increases and this in turn supports recognition, mobility, and international collaboration between institutions. Quality assurance agencies have demonstrated a strong interest in cooperating internationally, and to find ways to internationalise their activities "at home" (AQ Austria, 2014, p. 28). This is done, for example, through the use of international experts in quality reviews, or as members of the agencies' boards or committees. Both the reviewed institutions as well as the quality assurance agencies have identified several benefits in the use of international experts in the QA processes (see 3.3).

Internationalisation in one form or another is a hot topic for all countries covered in the Study. It is however not always unproblematic. In Poland, for example, internationalisation of QA – in the form of integration of international experts - is considered difficult because of the language barrier: institutions are not willing to have a QA procedure carried out in English, while there is limited availability of foreign reviewers who speak the Polish language (Kwiatkowska-Sujka, 2015). It is likely that similar difficulties are faced also by other countries where English is not yet widely used in the academic context and/or countries with a less widely spoken language. Some countries, such as Finland, have opted for a mixed approach, where an institution may choose whether it wishes to use an international panel and carry out the procedure in English, or opt for a fully Finnish (or Swedish) -language procedure. It should be of course kept in mind that the use of international reviewers is not the only way to internationalise the national QA system: engagement in international networks and projects may be a good option for different types of QA agencies.

Another way to internationalise quality assurance is the engagement in cross-border quality assurance activities. As mentioned above, the Bologna Process Ministerial Conference recommended in 2012 (EHEA, 2012j) that all countries in the European Higher Education Area should allow their institutions to use any European quality assurance agency to discharge of their national external quality assurance requirements, should they so wish, as long as national requirements are respected (and the agency performing the assessment is verified against the ESG/is registered on the European Quality Assurance Register – EQAR). The "European market" for quality assurance that was expected to emerge as a consequence of this commitment, has not – at least for the moment – been realised: for the time being only very few countries – through their legislation - allow their higher education institutions to freely choose a foreign QA agency instead of the/a national agency (EQAR, 2014b). In addition, while some quality assurance agencies are willing to explore the possibilities of carrying out reviews in other European countries (and some have in fact already experimented with this), the procedures are very labour intensive, often not financially interesting, and hard to implement due to cultural and language barriers. There is also the need to adopt the methodology to the local requirements. Hence, it can be

expected that, at least in the near future, cross-border assessment will not become the mainstream. While HEIs see several benefits in using a foreign quality assurance agency instead of a national one (ibid., p. 6), the wider implications of an eventual "QA market" are not yet clear. A stocktaking of the current state of the European dimension to quality assurance and recommendations for its further promotion can be found in the final report of the RIQAA project (EQAR, 2014b).

3.5. Conclusions

External quality assurance in Europe is characterised by constant evolution and a high degree of diversity in the methods and processes used. However, there is a strong shared European framework in which the QA agencies operate (and gain recognition) through the adoption of shared European standards and guidelines on quality assurance in 2005 and their practical implementation at the institutional level and by quality assurance agencies. Quality assurance in Europe is characterised by a strong involvement of stakeholders at all levels, by the importance given to constant enhancement of quality, by the fruitful and mutually reinforcing co-existence of internal and external quality assurance and by the autonomy of HEIs and independence of quality assurance agencies.

Quality assurance agencies in the EU largely comply with the ESG. Some quality assurance agencies have started to operate in other countries, although in many EU countries mandatory quality assessments can only be performed by national agencies. While the general procedures for quality assessments are standardised (self-assessment, site-visit, review report, follow-up), various country- or agency-specific configurations exist. In recent years, quality assessments of study programmes have been complemented by assessments of higher education institutions. The criteria to assess the quality of a programme or institution are similar between agencies and comply with the ESG, although the concrete criteria and indicators applied vary. In some countries HEIs can build a distinctive profile by undergoing an assessment of specific thematic elements (e.g. internationalisation) in addition to mandatory quality criteria. Specific to the quality assurance in the EU is a strong participation of stakeholders, especially students. Most common assessment outcomes are the permission to further operate a programme or an institution and, in some countries, impacts on public funding. In other countries, HEI and programmes simply receive recommendations for improvement.

The research on impact of external quality assurance is scarce, and impact analysis on QA in higher education is methodologically very challenging. In addition, it is not always easy to identify the areas of expected and actual impact, and to distinguish between direct and indirect effects. Despite the challenges, QA agencies have employed different ways to collect feedback on and input for their procedures and criteria.

The main benefits associated with external quality assurance seem to revolve around the potential of the QA systems to bring different actors in the sector together (nationally or with an institution) and to promote thus new thinking and critical assessment and identification of areas for improvement. Establishing external quality assurance has made quality and quality assurance an important topic at the institutional level. Overall, it can be said that systems where the methodology is highly participatory and non-bureaucratic are likely to have more positive impact in the identified areas. Also, systems that are in constant redevelopment are more likely to stimulate discussion in the HE sector as a whole, and within institutions, avoiding the risk of turning external quality assurance from a promoter of innovative thinking and institutional change into a routine procedure. The typical European QA methodology that relies on a peer review is highly appreciated, for the

possibility to discuss, at institutional or programme level, quality assurance and quality issues and get an outsider perspective on how things are done. The use of international peers is more labour and resource intensive but provides a useful additional dimension and can help identify national blind spots.

The information value of the external review reports to external target groups, such as students, parents, and employers, is currently limited and the reports are not widely used. Concise summary reports with core information on the review and its main outcomes could enhance the use and usefulness of external quality assurance reports beyond the immediate target groups.

Quality assurance is in constant change as it needs to respond to the wider developments in higher education and the needs of the institutions and programmes it is addressing. While there is a great variety in approaches, national contexts and maturity of systems between European countries, some common features may be observed. These include an increased focus on institutional (internal) quality assurance and the creation of quality culture; stronger stakeholder engagement; increasing interest in and need for an "international dimension", for instance, through the engagement of international reviewers. Agencies seem to be moving towards or exploring the possibilities of lighter touch approaches at the programme level in order to better respect the institutions' primary responsibility for quality assurance, to make more efficient use of the agencies' and institutions' resources, to allow for greater flexibility, and to focus on more enhancement-led approaches. Agencies are also giving greater attention to the quality and usability of information provided in and through the quality assurance reports. It can be said that, overall, quality assurance agencies are broadening their scope of activities, as they take on board advisory activities and provide more enhancement and support activities. In addition, though not yet mainstreamed, there is a slow move towards extending the agencies' area of operation through engagement in cross-border QA activities.

4. RANKING SYSTEMS

The present chapter seeks to analyse in detail the institutional framework and methodology of six global university rankings (ARWU, Leiden, THE, QA, BGU, U-Multirank), three national rankings (CHE University Ranking, Guardian, USNWR Best Colleges) and a global discipline-focus ranking (FT MBA rankings) (chapter 4.2). The comparative analysis of the 10 chosen rankings (see Annex 4a for detailed descriptions of the operational aspects and indicators of the respective rankings) is preceded by a brief description of the growing importance of global university rankings, a recent phenomenon affecting higher education systems worldwide (chapter 4.1). It is followed by a literature review of evidenced impacts of rankings (chapter 4.3), in particular, impacts of national rankings and MBA rankings that have been documented in empirical research. As mentioned in chapter 2, the results presented herein are based on in-depth desk research and systematic text analysis of ranking and related websites as well as an extensive literature review of publications documenting impacts of rankings.

4.1. Growing importance of global university rankings

KEY FINDINGS

- Global university rankings are **a recent phenomenon** compared to national rankings.
- The growth of global rankings coincides with the advance of **globalisation**, the new role of **higher education as a beacon for mobile capital and talents**, **marketization** of higher education, and the rapid development of **online digital media**.

National university rankings have been around for decades, but global university rankings first appeared only in 2003, when a team of researchers at the Shanghai Jiaotong University (China) produced the Academic Ranking of World Universities (ARWU) to 'benchmark' Chinese universities with top universities in the world. The methodology of the Shanghai ranking is very simple and the data used are drawn directly, and only, from publicly available information sources. The simplistic view of the so-called "world-class universities" presented by ARWU, focusing primarily on research outputs and awards, aroused heated debates worldwide and attracted a number of followers who pledged to produce global rankings that would better measure and represent the 'real quality' of universities. Among these are Times Higher Education–QS World University Rankings (THE-QS), published in 2004, which was split into Times Higher Education World University Rankings (THE) and QS World University Rankings (QS) in 2010, and U-Multirank, a multi-dimensional university mapping and ranking project funded by the European Union since 2009. At the time of this Study, ten global rankings were identified (Hazelkorn, 2015b), with US News & World Report's Best Global Universities (BGU) being the latest addition.

The growth of global rankings over the past ten years coincides with the advance of globalisation and the importance of higher education for social and economic recovery and development, the marketization of higher education, the increase in professional and academic mobility (both student and faculty), the rapid development of information

technology and digital media, as well as public calls for greater accountability. Traditional ways of assessing academic reputation over time, through closed-circle peer reviews, are being challenged by increasing 'transparency' brought by bibliometrics and other data readily available online to the wider world. Such data, processed and amplified by global rankings, especially media-driven rankings, play an increasing role in shaping the global standing of higher education institutions. Like it or not, higher education institutions and their sponsors (governments, research funding bodies, private investors) are caught up in the ranking race on the basis that their global standing plays a significant role in attracting mobile students and talented academics in the global competition and in justifying their value to their sponsors and society at large. Since higher education plays a critical role as a beacon for mobile capital and talent, its performance is now an important factor for national governments. Such assumptions are proven valid in many cases as shown in section 4.3 below.

4.2. Institutional framework and methods of ranking systems

KEY FINDINGS

- The majority of **global** university rankings source **comparable research-related data from one single data broker** – Thomson Reuters. The **use of data from data brokers and other readily available information sources may be a cost-efficiency consideration** for the rankers. This also implies that **data brokers shape the various influential global rankings systematically**, notably the exclusion of non-English publications.
- The **proliferation of global university rankings**, and customised rankings, is closely linked to the rapid development of **online digital media**, which are highly visible globally.
- The **proliferation of rankings calls into question the quality assurance of rankings**. A ranking audit has been introduced by the International Ranking Expert Group (IREG) as **a "self-regulatory" system**. However, the methodology of **the audit itself is still in need of improvement**, before being widely used to set the standards for rankings.
- There are **clear differences in the list of ranking indicators**, as well as their respective weightings, **between global rankings and national rankings**. **Global rankings**, regardless of their stated purposes, **rely heavily on research-related indicators**. **National rankings tend to focus on teaching/student-related indicators**, with little or no place at all for research indicators.
- Compared to research indicators, **teaching indicators vary to a much greater extent**. While it is possible to collect comparable teaching-related data globally, largely through surveys, it may be hard to justify the resource input into such massive data collection. So far none of the global rankings explicitly announced the representativeness and response rates of the teaching-related surveys.
- **Traditional rankings are becoming more inclusive** (ranking at least 400 universities). However, the larger number of universities ranked in ordinal numbers only **exaggerates the marginal, often unverifiable, differences** among those ranked below the 100th position.
- **Traditional rankings are moving in the direction of "multiranks",** allowing users to sort the rankings by their own choices. However, such sorting option does not always call up a different dataset.

4.2.1. Institutional framework

Very little research has been conducted on the institutional framework of university rankings, although such rankings are increasingly affecting political decisions on higher education development at all levels. Questions like: *Who are the key players behind university rankings? Why do rankings exist and flourish in the past one decade? How do global rankings operate and spread around the globe?* are no less important to answer than questions about the deficiencies and benefits of rankings.

Within the limited timeframe of the Study, we have conducted a brief but systematic analysis of the operational aspects of the ten sampled rankings (see chapter 2 on sampling rationales) based on publicly available information on the ranking providers' websites and related information sources. Some of the key observations are highlighted below for discussion and future investigation.

Global university rankings and global data brokers

One of the major criticisms of global university rankings is that they primarily focus on research. Few have, however, pointed out that these global rankings have been using the same source of information from Thomson Reuters, a global data broker based in New York City and Toronto. Among the sampled rankings, ARWU, THE, BGU, Leiden, as well as U-Multirank, have been sourcing publication and citation data from Thomson Reuters' Web of Science and Thomson Reuters Incite. BGU and THE have further adopted Thomson Reuters Reputation Survey in its ranking methodology. The only exception is QS, which sourced its data from SCOPUS, a product of Elsevier, a Dutch-based data broker. The fact that the majority of the global rankings relies on research indicators backed up by one single data broker deserves some critical analysis of the data broker's role in the ranking market.

University rankings and digital media

Among the ten rankings sampled, five are direct outputs from media corporations (THE, BGU, FT, Guardian, USNWR Best Colleges), one (CHE University Ranking) is a joint venture between a research centre (CHE) and a newspaper (Die Zeit). Three of these are national rankings (Guardian for the UK, USNWR Best Colleges for the US, CHE University Ranking for Germany) and three are global rankings (THE, BGU, and FT). Two of the three media-driven global rankings (THE, BGU) were introduced at a much later time than those media-driven national rankings. The shift from print media to digital media enabled rankings to be published globally, online, at a much lower cost and with a much wider circulation network. It also enabled ranking providers to publish more "customised" rankings, targeting certain regions, countries, disciplines, subjects, study programmes, age of institutions etc., without being limited by the space of the paper or magazine. The flourish of rankings, especially media-driven global rankings, must therefore be studied against the backdrop of the revolutionary changes in the media world. Technically the challenge for producing multidimensional rankings today is significantly smaller than ten years ago.

Spin-off businesses from university rankings

All the sampled rankings offer their results for online public viewing free of charge. Except the CHE University Ranking published by *Die Zeit*, which requires users to log in before viewing, all the rankings are openly accessible to the website viewers without conditions. None of the rankings exists without a "business model" in a commercial sense, except U-Multirank which has been funded with public money until now. The most noticeable spin-off products of rankings are: advertisements on the ranking websites (notably THE, FT, BGU, USNWR Best Colleges, and Guardian), events associated with the rankings or targeting the ranking users (notably QS, FT), consultancy services to institutions (e.g. government ministries, funding agencies, universities, etc.) using the source data of the rankings and the ranking methodology (notably Leiden and ARWU). Invariably, ranking providers also collect personal and professional data from the users, and, in some cases self-reported information from higher education institutions for profiling (e.g. ARWU's Global Research University Profiles database introduced in 2013). Whether such information is later used for commercial purposes is not always clearly stated. Nonetheless, with the growth in the global higher education intelligence business, such data submitted free of charge by universities or related stakeholders, have great potential to be commercialised and sold back to higher education institutions, funding bodies and governments in one form or another. The commercial aspect of rankings, as well as those feeding data to rankings, deserves some further investigation.

4.2.2. Self-regulatory framework of rankings

According to Simon Marginson (2009), the knowledge economy will only function when the open system enabled by the advancement of communication technologies, especially the Internet, is "closed" to create "scarcity" and, therefore, "value" for knowledge. As a result, a "k-status system" (knowledge-status system) has emerged to bring an "ordered" status which assigns value to the selected few. Global rankings, despite their overreliance on research output and bibliometric data, are seen as necessary tools for the functioning of such a "k-status system". They have been used by higher education institutions, intentionally or unintentionally, to legitimise their existence and to promote their excellence to different stakeholders around the world.

Rankings themselves, however, are not subject to any external quality control. Ranking providers are often self-proclaimed experts. The abundance of global rankings today further leads to the question of the quality assurance of rankings. There has not been any ranking of rankings, but in 2011, a "ranking audit" was introduced by the International Ranking Expert Group (IREG), an international association of ranking organisations, as a self-regulatory mechanism to control the quality of rankings.

The IREG audit translates the Berlin Principles on Ranking of Higher Education Institutions (2006) (Annex 4c.) into 20 audit criteria and adopts a methodology resembling the quality assurance mechanism commonly practiced in higher education for measuring the quality of rankings. The procedure starts with a self-assessment report by the ranking organisation, which is followed by a site visit by independent experts, and ends with a report, a publicly available executive summary and the award of an "IREG approved" label. Up to the time when this report is written, two national rankings (Perspektywy University Ranking, Poland; CHE University Ranking, Germany), and a set of international rankings (QS World University Rankings, QS University Rankings Asia and QS University Rankings Latin America) have obtained the "IREG approved" label. The audit procedure takes 12 months. The label is valid for three years.

The IREG Ranking Audit is expected to:

- Enhance the transparency of rankings
- Give users of rankings a tool to identify trustworthy rankings; and
- Improve the quality of rankings.

Based on the recommendations made to the three audited rankings, it appears that the audits did attempt to push for more transparency and higher quality in rankings. Some critical remarks on the audited rankings were presented in the published executive summaries, advising ranking providers to establish a feedback mechanism for institutions to correct their data, for example. However, by comparing the recommendations made to the audited rankings, some inconsistencies were found. For instance, Perspektywy was advised to remove the less relevant "sports achievement" from the list of indicators and was criticised for including far too many input indicators (such as library holdings, support for student scientific interests), whereas CHE University Ranking passed the audit with a nearly perfect report. No comments were made on the large number of input indicators such as sports facilities, student sport, excursions, facilities, rooms, libraries etc. It seems that the audit methodology itself is still in need of improvement before being used to set the standards for rankings.

4.2.3. Methods of the ranking schemes

Indicators used by global and national rankings

Clear differences between global rankings and national rankings are observed in the lists of ranking indicators as well as their respective weightings. Global rankings have a tendency to focus on research/staff-related indicators, in particular publication volume and citations, and allocate substantial weighting to these indicators. Teaching indicators, when used, are limited to student staff numbers/ratios and the teaching/learning environment. On the contrary, national rankings (Guardian, USNWR Best Colleges and CHE University Ranking) tend to focus on student/study-related indicators, with little or no place at all for research indicators (see Table 2 below).

Table 2: Number of indicators used and weightings of indicators

Rankings (2014/15)	Total no. of indicators	Research/staff-related indicators		Teaching/student-related indicators		Others (weighting)
		no.	weighting	no.	weighting	
THE	13 (in 5 groups)	7	67.25%	5 (2-PhDs)	30.25%	1–income from industry (2.5%)
QS	6	3	65%	3	35%	0
BGU	10	8	90%	2 (PhDs)	10%	0
ARWU	6	6	100%	0	0	0
Leiden	8	8	100% (weightings of individual indicators are unclear)	0	0	0
U-Multirank	31 (institutional ranking)	11	n.a.*	11	n.a.*	9 – knowledge transfer; regional engagement
FT	20	5	19%	15	81%	0
CHE University Ranking	Up to 37	**	n.a.*	**	n.a.*	**
Guardian	8	0	0%	8	100%	0
USNWR Best Colleges	7	0	0%	7	100%	0

* No weights are attached to any indicator, meaning each indicator contributes equally to the final result.
** No clear indication on the ranking website.

Research-related indicators used by global university rankings

Global university rankings, regardless of their stated purposes (see 4.3.1 below), all heavily rely on research indicators. ARWU and Leiden use solely research indicators. BGU, despite its intention to help undergraduate and postgraduate students in their choice of study destinations, uses primarily research indicators. Eight out of the ten indicators are research/staff related, which all together account for 90% of the overall weighting, and the remaining two (10%) are on PhD students. THE claims to have considered teaching/learning quality in their methodology, but still over 65% of the overall weighting is research/staff related. Besides, two out of the five teaching/student-related indicators are on PhD students. Similarly, QS allocates over 65% of the overall weighting to research/staff-related indicators (see Table 3 below).

The dependence of global university rankings on research output indicators is known to be a methodological limitation. Continuous efforts of the ranking providers to improve the research indicators through 'normalisation' against the sizes of institutions, subject areas or staff numbers have been observed, but few global rankers have ventured into massive data collection of teaching and learning indicators. If they do, the few teaching-related indicators tend to measure the reputation of the HEIs, staff-student ratio and other input factors rather than the actual quality of the learning process or the impact of the education.

Measuring actual learning, rather than resource inputs such as library holdings or campus facilities, is very complicated and complex. Given the vast diversity of higher education systems around the world, there are currently no internationally comparable and meaningful indicators of teaching and learning. It is too costly, if not impossible, for global rankings to include globally comparable teaching and learning indicators due to the differences in higher education systems around the world. U-Multirank, with the support of EU funding, has attempted to overcome this limitation by using a wider range of indicators. Other global rankings, especially the media-driven ones, may find it too costly to take in more teaching related indicators in the absence of convenient global data sources like those for academic publications and citations.

Table 3: Global rankings – Research/staff-related indicators and weightings

(see extended table in Annex 4b)

	THE	QS	BGU	U-Multirank
Indicator (weighting)	Reputation survey (research excellence) (18%)	Reputation survey (academics) (40%)	Global research reputation (12.5%)	Interdisciplinary publications
Indicator (weighting)	Ratio of international to domestic staff (2.5%)	International faculty ratio (5%)	Regional research reputation (12.5%)	International academic staff
Indicator (weighting)	Citations (30%)	Citation/faculty (20%)	Total citations (10%)	Citation rate
Indicator (weighting)	Publications/ academic staff (6%)	-	Normalised citation impact (10%)	Research publications (size-normalised)
Indicator (weighting)	International co-authored publications (2.5%)	-	Publications (12.5%)	International joint publications
Indicator (weighting)	Research income (6%)	-	No. of publications among top 10% cited (12.5%)	Top cited publications
Indicator (weighting)	Institutional income/academic staff (2.25%)	-	% of publications among top 10% cited (10%)	External research income
Indicator (weighting)	-	-	International collaboration (10%)	International doctorate degrees
Indicator (weighting)	-	-	-	Art related output
Indicator (weighting)	-	-	-	Post-doc positions

Research-related indicators used by national rankings and discipline-based rankings

National rankings are clearly built around teaching and learning indicators for the purpose of informing study choices. Guardian (UK) and USNWR Best Colleges (US) rankings of national universities do not include research indicators at all. CHE rankings of German universities also have most indicators focusing on teaching and learning. Financial Times global rankings of MBA programmes, a discipline-based ranking, use also only a small share of research indicators, weighting less than 20%.

Teaching-related indicators used by global university rankings

ARWU and Leiden do not include any teaching/student-related indicators. For THE, QS and BGU, the following teaching/student indicators are used:

Table 4: Global rankings – Teaching/student-related indicators and weightings

	THE	QS	BGU	U-Multirank
Indicator (weighting)	Total students/academic staff (4.5%)	Student-to-faculty ratio (20%)	Number of PhDs awarded (5%)	Bachelor/Master graduation rate
Indicator (weighting)	PhD awards/bachelor (2.25%)	Employer reputation (10%)	Number of PhDs awarded per academic staff member (5%)	Graduation on time (bachelors/masters)
Indicator (weighting)	PhD/academic staff (6%)	International student ratio (5%)	-	Student mobility
Indicator (weighting)	Reputation survey (teaching) (15%)	-	-	Foreign language bachelor/master programmes
Indicator (weighting)	Ratio of international to domestic students (2.5%)	-	-	International doctorate degrees
Indicator (weighting)	-	-	-	Bachelor/Master graduates working in the region
Indicator (weighting)	-	-	-	Student internships in the region

As shown in Table 4 above, both QS and THE use student-faculty ratio and international-domestic student ratio as indicators, but with different weightings. They have also included "reputation" indicators. THE allocates 15% of the overall weighting to teaching reputation, which it measures with a survey of experienced scholars. QS also measures reputation, weighting 10%, through a survey of employers. Both of them do not survey students directly. Different from QS and THE, BGU relies largely on research indicators. Strictly speaking, it does not use any teaching/student-related indicators if PhD students are considered researchers rather than students.

U-Multirank is an exceptional case among global university rankings. More teaching/student related indicators have been taken into consideration than in any other global ranking. These are mainly output indicators concerning graduation rate/time, internship and

graduate employment in the region, as well as internationalisation indicators, including foreign-language taught programmes, student mobility and international doctorate degrees.

Teaching-related indicators used by national rankings and discipline-based rankings

Overall, teaching/student-related indicators considered by national rankings vary to a greater extent than those used in global rankings (see Table 5 below). They are not limited to student-faculty ratio, international student number/ratio, or graduation rate/time. Instead, national rankings also use input indicators such as entry scores, student selectivity, resources (per student). Student satisfaction plays a significant role (25% of the overall weighting) in the UK, made possible by the availability of the National Student Survey. In the US, retention and undergraduate academic reputation gain equally heavy weighting (22.5% each) in the USNWR Best Colleges rankings. Neither Guardian nor USNWR Best Colleges use any research indicator in the national university rankings.

Table 5: National rankings – Teaching/student-related indicators and weightings

	Guardian (UK)	USNWR Best Colleges (US)
Indicator (weighting)	Entry scores (15%)	Student selectivity (12.5%)
Indicator (weighting)	Student / Staff ratios (15%)	Faculty resources (20%)
Indicator (weighting)	Expenditure per student (15%)	Financial resources (10%)
Indicator (weighting)	National Student Survey - Teaching (10%); National Student Survey - Assessment and Feedback (10%); National Student Survey - Overall Satisfaction (5%)	Retention (22.5%):
Indicator (weighting)	Value Added Scores (15%)	Graduation rate performance (7.5%)
Indicator (weighting)	Career prospects (15%)	Alumni giving rate (5%)
Indicator (weighting)	-	Undergraduate academic reputation (22.5%)

Similar to national rankings, FT's global MBA rankings use primarily teaching/student-related indicators. Much of the overall weighting has been given to study outcome, using salary and career development as the proxies. Apart from that, internationalisation and gender (female students/faculty members/board members) have been given additional weighting. Research indicators account for 15% of the overall weighting, with 10% attributed to publication volume and 5% to the number of PhDs awarded. Two indicators that are uniquely used by FT's global MBA rankings are value for money (3%) and language requirements (1%) (see Annex 4a). To an extent, this is to be expected: MBAs are more of a professional than an academic degree.

Compared to research indicators, which are heavily dependent on either publication volumes and citation indices, teaching indicators vary to a much greater extent, ranging from input indicators (e.g. student selectivity, entry scores), through process-related indicators (e.g. learning environment, student satisfaction of teaching and assessment), to output indicators (e.g. graduation rate/time, graduate salary and job placement, alumni giving). Different rankings use different sets of teaching/student-related indicators with few overlaps, often, over the use of PhD-related indicators and student-faculty ratio.

Data collection methods

Table 6 on page 55 presents an overview of the data sources for the sampled global rankings. The choice of indicators and the number of indicators considered in the rankings do not only have an impact on the ranking results, but on the subsequent data collection exercise. The more the rankers rely on data brokers and other readily available information sources, the less input, including human resources, time and monetary input, will be required for data collection and data validation. Therefore, the common choices of the few research indicators supported by Thomson Reuters' databases are no coincidence but very likely an economic decision of the ranking providers. It is possible to collect more data for more indicators to more accurately reflect the work, or even the quality of work, delivered by higher education institutions. The question is whether such hard-won data can justify the resources input into the massive data collection exercise. U-Multirank is a case in point. Can its massive data collection effort still be sustained once EU support comes to an end, as it probably will at some stage?

Given the pivotal role of Thomson Reuters behind all the major global university rankings, the information in its databases, in terms of quantity, quality, validity, and geographical, linguistic and disciplinary coverage, systematically shapes the sample frame of universities eligible for selection by the ranking providers for the rankings. Universities and scholars who are not in the radar of Thomson Reuters do not even have an entry ticket into most of the global ranking races. This implies that disciplines or non-English-speaking journals underrepresented in Thomson Reuters' databases are systematically disadvantaged in the ranking races. The same applies to the reputation surveys. The sampling frames and representativeness of the responses are crucial for the quality and validity of the data collected for the rankings, especially when the response rates of the surveys are known to be low and varied on an annual, geographic or disciplines basis. None of the global ranking announced the response rates and representativeness of the survey responses despite the claim that tens of thousands of people are surveyed.

Table 6: Global rankings – Data sources and data collected

Ranking (Data) / Data source	ARWU	Leiden	U-Multirank	THE	QS	BGU
Bibliometric database (Thomson Reuters– Web of Science)	Yes. SSCI, SCIE, Highly cited researchers, Nature and Science.	Yes. Volume and citations of articles, reviews in core journals (excl. Art & Humanities, trade journals)	Yes. Volume of publications (articles only) and citations. CWTS licensed.	Yes. Volume of publications and citations.	No	Yes. Volume of publications (all disciplines, articles, reviews, notes), citations (excl. Art & Humanities), highly cited publications.
Bibliometric database (Elsevier– SCOPUS)	No	No	No	No	Yes. Volume of publications and citations.	No
Survey	No	No	Yes. Student survey.	Yes. Annual academic reputation survey on research; Annual academic reputation survey on teaching and learning; conducted by Thomson Reuters.	Yes. Global survey of academic experts; global survey of employers.	Yes. Thomson Reuters Academic Reputation Survey.
Publicly available information	Yes. Nobel Laureates and Fields Medalists from respective official websites	No		No	No	Yes. Data for school-level indicators. If not available, z-score of zero (mean score of all universities) used.
Self-reporting by HEIs	No	No	Yes. Institution questionnaire and Department questionnaire for data at respective levels.	Yes, when necessary. Data for missing data points.	No	No
Other data sources	Yes. Academic staff numbers collected from national agencies, ministries, rectors' conferences, etc.	No	Yes. PATSTAT database for data on patents.		No	No

Data visualisation

Rankings "enjoy a high level of acceptance among stakeholders and the wider public because of their simplicity and consumer type information" (AUBR, 2010). This remains true, to a large extent, in the past five years. However sophisticated the ranking methodology and data collection process may be, the presentation of rankings boils down to a simplified league table, sometimes allowing users to select a few of their choices for detailed comparisons. In most cases, the universities are ranked in ordinal numbers based on the scores they earned according to the criteria defined by ranking providers. The difference between number x and y is not always meaningful. In fact, most rankings have to rank universities alphabetically with tied ranks or broad bands after the 100th position because of the statistically insignificant differences.

Ironically, the marginal differences in the scores of universities being ranked do not stop ranking providers from expanding the published ranking lists. Despite the insignificant differences between ranks, more "world-class university" positions have been created in the past years, not only because of the diversification of existing rankings to create numerous customised sub-rankings or the emergence of new rankings, but also the extension of ranking lists as a general trend. Among the global rankings, THE now ranks 400 universities, QS 800, BGU and ARWU 500 each, Leiden 750 and U-Multirank 850. The extended lists give the impression that global rankings have been opened up to embrace more universities from different corners of the world. At the same time, they also convey a false impression that universities ranked 300th are significantly better than 500th, for example, whereas the difference between the two may not even be verifiable. In this regard, U-Multirank avoids the use of ordinal numbers on the league tables, yet the listed universities must still be ranked alphabetically or by the score(s) of selected indicator(s). The only difference is that users have to count the positions themselves.

Not going so far as to suppressing the position labels, all the other global university rankings have gone interactive and multidimensional in the past years. Today, none of the ranking providers issue one single authoritative table that cannot be customised by the users. In some cases, universities may be attributed different positions when the users change the ranking criteria. In others, the positions attributed to the universities on the default table remain unchanged, although users may sort and view the scores according to different indicators. Besides more interactive features introduced to the global rankings, sub-rankings based on world regions, countries, disciplines, subjects, age of institutions, using the same methodology or adjusted methodology, are published separately to target different users. In other words, to different degrees, all the rankings have now moved in the direction of "multiranks", at least in presentation. One may argue that this is a significant impact of U-Multirank. On the other hand, this trend also implies that the uniqueness of U-Multirank in this aspect could disappear over time as the commercial rankings are moving at a much faster pace in reaping the benefits of "multiranks", such as providing multi-indicator rankings and more interactive and user-driven interface for visualising their rankings.

Ranking dissemination

The most popular rankings may not be the ones that employ the best methodology or the ones that use the highest quality data. Popularity is, rather, determined by the level of acceptance and adoption, which hinges on the dissemination network of the rankings and their target user group. Among the rankings compared, we may say in general that media-driven rankings (THE, FT, Guardian) tend to target the general public and enjoy steady press coverage using their own information channels online or in print. University-driven

rankings tend to serve other purposes such as policy support, as in the case of ARWU, or consultancy, as in the case of Leiden. Their visibility is much lower compared to media-driven rankings, partly because they do not have their own media outlets to disseminate the results, promptly and regularly, and partly because they are not intended for public use.

Not all the popular rankings have their own media outlets, however. CHE, a research centre, does not publish the rankings itself but partnered with *Die Zeit*. QS publishes its own rankings online, but maintains a network of media partners. For U-Multirank, no clear communication strategy is observed, but up to now, it enjoys the support of the EU and its news and diplomatic networks. The challenge of U-Multirank to secure a high level of popularity is therefore more a question of the future when EU support ceases.

4.3. Impacts of rankings

KEY FINDINGS

- Rankings have **stated purposes and underlying, often commercial, purposes** that may not have been stated. The purposes of rankings **may change over time**, towards commercialisation. The commercial impacts of rankings should **not be underestimated** although they have been **under-researched**.
- The **sustainability of U-Multirank** will depend much on **a robust business model** since the project is both a **high quality and high cost** one.
- Rankings have **both intended impacts**, directly related to their stated purposes or underlying commercial purposes, or **impacts that are not intended**.
- Impacts of rankings have been found on **student recruitment and admission**, **higher education marketing**, **reputation and legitimacy** of higher education institutions, **governance and operation** of higher education institutions, and **academic publication practices**.
- Rankings have **particular impacts on** international mobile students, high-achieving students or scholars, established institutions and highly ranked institutions.

4.3.1. Stated purposes of sampled rankings

Before assessing the unintended impacts of rankings, one needs to first identify the stated purpose of the rankings. For example, the use of ARWU outside the Chinese policy circle turned out to be an unintended impact because the rankings were initially commissioned by the Chinese government for the purpose of policy support. One must note that the intended purpose of rankings can change over time, however. Using ARWU as an example again, the stated purpose of the rankings is now "to build databases of major research universities in the world and clearinghouse of literature on world-class universities, and provide consultation for governments and universities" (ShanghaiRanking Consultancy, 2014a). Clear enough, ARWU is not for advising student choices. Similarly, the Leiden ranking has been created for the purpose of consultancy, targeting mainly universities, funders and governments. This is how it phrases its purpose: by "using a sophisticated set of bibliometric indicators, the ranking aims to provide highly accurate measurements of the

scientific impact of universities and of universities' involvement in scientific collaboration" (CWTS B.V., 2015). Through the ranking, the ranking provider claims to offer clients with "a well-founded basis for making key strategic decisions with respect to improving their research performance", which then "significantly expands and improves their funding opportunities" (CWTS B.V., 2015).

Very different from ARWU and Leiden, advice on study choices is the main stated purpose of QS and BGU. QS suggests that it offers "the best tools and the best independent expert information" to help students make informed decisions over education and career choices (QS World University Rankings, n.d.). USNWR claims that BGU, "based on schools' academic research and reputation, allow students to compare universities around the world…to explore the higher education options that exist beyond their own countries' borders and to compare key aspects of schools' research missions" (USNWR, n.d.) Both of these rankings assigned heavy weightings to research indicators, assuming that research performance and reputation of academics have a significant bearing on education quality of an institution.

Closely resembling each other, THE and U-Multirank boast their comprehensive and balanced approach in ranking universities across their entire core missions – teaching (and learning), research, knowledge transfer and international outlook (orientation), and regional engagement (in U-Multirank). THE claims that it is trusted by "students, academics, university leaders, industry and governments" (THE, 2015a), which are also target users of U-Multirank. Apart from the difference in the number of indicators used – THE using 13 and U-Multirank using 31 (institutional ranking) – one of the major differences between the two is the elitist approach of THE and the inclusive approach of U-Multirank. This means that THE is not only for advising the above mentioned stakeholders, but also for judging and shaping world-class universities, a purpose similar to that of ARWU.

As for national rankings like USNWR Best Colleges, Guardian, CHE University Ranking, as well as FT's programme-specific rankings, helping students make informed study choices is the main stated purpose. With the exception of CHE University Ranking, all these rankings appear as a consumer information tool that compares also the prices (tuition fees) of education among the ranked institutions or programmes. A 3% "value for money" indicator is used by FT's Global MBA rankings, for example.

4.3.2. Intended impacts of rankings

As shown above, different rankings have different purposes and target users. The impacts, of rankings, intended or unintended, should therefore be assessed against the stated purposes and target users of the rankings concerned. In the case of ARWU, for example, its impacts on China's higher education policy are evident in its goal-setting role for the "211 and 985 projects" (China`s HE `excellence initiative). Beyond that, it also has unintended impacts on other higher education systems and higher education institutions, some of which later become ARWU's new target clients – governments and universities. One of the concrete examples is the 2013-14 Ranking of Macedonian Higher Education Institutions commissioned by the Ministry of Education and Science of Republic of Macedonia in 2013. In contrast to the high-profile ARWU, another research-only ranking, the Leiden ranking has not caught as much global attention. The two rankings have very similar backgrounds in that they are both run by university researchers and are now both spin-off companies of public universities. However, the impact of the Leiden ranking has largely been confined to what it intends to have – spin-off consultancy services for "universities, academic hospitals, research institutes, funding bodies, government/European Union, industry and network

organizations". Among them, Leiden University, University of Amsterdam, University of Manchester, University College London, University of Southampton, Heidelberg University, Uppsala University, ETH Zürich, EPFL, are said to be the users of CWTS' bibliometric analysis, which also forms the backbone of the Leiden ranking (CWTS B.V., 2015).

Other intended impacts of rankings that may not be clearly stated by the ranking organisations include the attraction of visitors to ranking websites that serve also as advertising platforms, the increase of circulation and subscriptions to the newspapers or magazines carrying the results of rankings, the promotion of spin-off commercial activities (e.g. conferences, workshops, fairs, training programmes) associated with the rankings, etc. As Marginson (2009) puts it, the k-status system itself (including not limiting to university rankings) has developed into a "bounded quasi-economy". The commercial impacts of rankings, especially media-driven rankings, should not be underestimated, even though such impacts have been under-researched in the past years. Among the ten rankings sampled for this study, the only ranking scheme that has not been explicitly associated with any commercial activities is U-Multirank. The sustainability of U-Multirank will, however, depend much on a robust business model since the project is both a high quality and high cost one.

4.3.3. Other impacts of rankings

Not all the impacts of rankings can be directly attributed to individual rankings. In fact, most of the impacts of rankings are indirect or unintended impacts that are difficult to establish causal relationships with rankings. There is, however, no lack of empirical studies on the impacts of rankings on student recruitment and admission, higher education marketing, reputation and legitimacy of higher education institutions, governance and operation of higher education institutions, and academic publication practices. Some of the most discussed impacts are presented below.

Impacts on recruitment and admission

Studies of the impacts of rankings on student recruitment and admission are mostly related to national rankings (e.g. USNWR college rankings) and business school rankings (FT Global MBA rankings). This comes as no surprise considering that national and business school rankings aim primarily at guiding study choices. These rankings are found to have a significant impact on a school's ability to attract more new applicants (Standifird, 2005; Peters, 2007 cited in Wilkins and Huisman, 2012), in particular, 'high achievers' including the most able students as well as top scholars (Clarke, 2007; Hazelkorn, 2008; Wilkins and Huisman, 2012). Conversely, poor rankings are said to have impacted negatively on staff morale, making it difficult to retain good staff (Hazelkorn, 2008).

In the US, questionable strategic admission practices are found to be associated with college rankings. These include admissions based merely on ranking indicators (e.g. standardized tests), preference given to Early Decision applicants, placing applicants who will likely decline admission on waitlists, and soliciting applications from likely rejects[8] (Avery, Fairbanks and Zeckhauser, 2001 cited in Meredith, 2004; Stecklow, 1995 cited in Meredith, 2004; Clarke, 2007) so as to increase the selectivity rate. These admission practices disadvantage particularly low-income applicants who score comparatively worse on standardized tests and are financially less able to commit through Early Decision (Levinson, 2002; Nettles, Thoeny and Gosman, 1986 cited in Meredith, 2004; Clarke, 2007).

[8] 'Rejects' is a common term used in the US context meaning those who applied but are not admitted to the university.

The impacts of global university rankings on recruitment and admission are under researched when compared with the impacts of national rankings. The links are not as clearly established. However, the use of bibliometric data by most global rankings has indirectly prompted universities to recruit and promote scholars with 'high-impact' research outputs, meaning outputs in selected journals indexed by Web of Science (Thomson Reuters) or Scopus (Elsevier). Bibliometrics, though not global rankings *per se*, can be used as evidence in human resource decisions (Sadlak, 2007; Harland, 2013). One may therefore conclude that global rankings, given their focus on research outputs, have more direct and visible impact on staff recruitment than student recruitment, although reputation conveyed by rankings in general does play a role in influencing student choices (Hazelkorn, 2015b).

Impacts on marketing, visibility and reputation

University rankings, created by research centres affiliated to universities or media corporations, generate substantial media coverage every year when the results are released. Media coverage of the rankings heightens public interest in the 'performance' and 'quality' of universities, although critics found that rankings have created more "public confusion" than reflecting the "real quality difference" because of the "simplistic picture" they present and the "arbitrary definition of quality" they apply (Hazelkorn, 2008). Regardless of the quality of rankings concerned, it was found that universities, especially highly ranked ones, can seldom resist the temptation to cite the league tables in their publicity materials (e.g. websites, press releases, official presentations) and to use rankings to support their claims of "excellence" (Hazelkorn, 2008, Wilkins and Huisman, 2012, Hazelkorn, Loukkola, Zhang 2014). Conversely, universities that are not ranked or ranked poorly suffer from negative publicity and thus have to spend time on damage control (Hazelkorn, 2008). Those not ranked or ranked lower than their counterparts may be seen as 'losers', even though the apparent differences in ranking scores may not be significant enough to reflect the real differences (Zhao, 2007).

Over time, media coverage of rankings can have a lasting impact on the institutions' reputation (Schultz et al., 2001 cited in Standifird, 2005), whereas reputation is believed to have an impact on the networking and partnership activities of universities (Sadlak, 2007, Hazelkorn, 2008) and the competitive edge of the institutions in the "academic marketplace" (Zhao, 2007) for resources (e.g. research grants, donations) and talents.

Impacts on policy, governance and management

The reputation and legitimacy of universities obtained through rankings has material impact on universities' acquisition of resources, such as tuition fees, sponsorship, government funding, as well as talented students and faculty (Zhao, 2007, Marginson, 2009, Hazelkorn, 2008, Wilkins and Huisman, 2012). Government and funding agencies tend to support highly ranked universities (Marginson, 2009). Some use rankings to allocate funding to universities or outbound mobility scholarships for students. Two recent examples are the Russia's Global Education Program, which selected eligible schools and programmes based on their inclusion in ARWU, THE and QS ratings (Global Education Program, n.d.) and The Hong Kong Scholarship for Excellence Scheme which draws reference to the top 100 institutions ranked by QS, ARWU, THE and BGU; and the top 30 colleges in the National Liberal Arts Colleges Rankings published by USNWR (Hong Kong Education Bureau, 2014). An earlier example of the Mongolian government's scholarship scheme for outbound mobility, drawing reference to world rankings, was also documented (Clarke, 2007).

Besides resources, university rankings also encourage isomorphic behaviour and actions among competing institutions, resulting in a homogeneous pattern of provision. Evidence was found that successful and highly ranked MBA programmes in one institution may induce others to offer similar programmes; whereas universities that are traditionally providers of undergraduate programmes may shift their focus to flagship MBA programmes and vice versa (Arlbjørn, Freytag et al., 2008, Wilkins and Huisman, 2012). At system level, "academic drift" as a result of institutions' desire for "upward mobility" along the ranking scale (i.e. the desire of universities to become 'research-intensive' universities despite their different missions orienting towards teaching or practice) and the tendencies for institutions to move towards an English-language monoculture promoted by global rankings (Zhao, 2007, Marginson, 2009) have become a concern. Mergers of institutions or academic departments, though not in great numbers, are also reported by university leaders (Hazelkorn, Loukkola, Zhang, 2014) and the mass media as one of the effects of global rankings (Labi, 2011).

In terms of management, the quantitative approach of rankings is criticised for driving universities, especially ambitious ones, to destroy traditional collegial decision-making mechanism and replace it with more centralised, corporate management structure within academia (Erne, 2007). 86% of the 171 university leaders surveyed by the European University Association's Rankings in Institutional Strategies and Processes (RISP) project reported that they monitor their position in rankings. This is especially so among universities that are ranked (Hazelkorn, Loukkola, Zhang, 2014). The obsession with quantitative performance metrics and the demands from different rankings using different methodologies are also found to have driven universities into unethical 'data massage' (e.g. manipulating faculty size so as to report a higher productivity per head) or even data fabrication (e.g. test scores, acceptance rates) activities (Stecklow, 1995, Carmo dy, 1987, Hunter, 1995 cited in Meredith, 2004; Erne, 2007; Clarke, 2007).

Impacts on academic publication practices

As shown in section 4.2.3 above, publication volumes and citation indices account for a heavy weight in the overall weighting of the majority of global university rankings. Moreover, because five out of the six influential global rankings draw their data from Thomson Reuters, what matters, in fact, are publications in journals indexed by Thomson Reuters. Journals that are not indexed by Thomson Reuters are automatically excluded from citation analysis generated by Thomson Reuters' Web of Science and are therefore 'useless' for global rankings. Resulting from such interdependence between global rankings and Thomson Reuters (to a lesser extent Elsevier's SCOPUS), strategic publication practices were observed. These may include, but are not limited to, recommending or coercing academics, especially young academics, to publish in 'high-impact' journals indexed by one of the two data brokers supporting the rankings, introducing measures to raise the 'visibility' of publications so as to attract more citations (e.g. open access to research outputs, use of research information tools and academic social networks), and encouragement of international co-authorship (Ebrahim, Salehi et al., 2013).

While some of the efforts to increase the visibility and citations of academic publications have positive impacts on the spread of knowledge, the restrictive recognition of journals indexed by selected databases that feed their data into rankings has notable negative impacts on disciplines that are underrepresented in the relevant databases (Erne, 2007). These include young and niche disciplines or disciplines that traditionally favour book publications rather than journal articles. Obsession with high-impact journals and journals indexed by selected databases can skew the choice of research methodologies, favour theory over practical relevance, favour English over other languages, discriminate against

young or niche disciplines and encourage academics to publish within the mainstream instead of exploring the new and innovative (McKinnon, 2013; Harley and Lee, 1997). In the long run, if rankings, and the bibliometric measurements behind them, are turned into an end in itself and when institutions focus more on how to improve their ranking positions rather than on actual quality of research, the real quality in higher education may suffer.

4.3.4. More impacts on some than others

The impacts of rankings on institutions are not identical across the board. It was found earlier that old established universities are more likely to compete for the highest rankings and, to be influenced by the mainstreaming pressure of rankings (Harley and Lee, 1997). Public institutions, rather than private institutions, are more likely to be impacted by rankings, probably because private universities have more flexibility to respond to rankings (Meredith, 2004). Ranked institutions took more actions, either to make use of rankings or to control damage, than unranked institutions which were likely to dispute the validity of rankings and did nothing to improve their positions (Hazelkorn, 2008; Wilkins and Huisman, 2012).

From the perspective of student and faculty recruitment, high-achievers are the ones most likely to be impacted by rankings (Meredith, 2004; Clarke, 2007; Wilkins and Huisman, 2012). In the American context, international students, especially Asian American (or non US Citizens) and those who have intentions of getting doctoral, medical, or law degrees are more inclined to use rankings as information tools (Clarke, 2007).

Highly-ranked universities are also more likely to benefit from positive impacts on recruitment than lowly-ranked universities which may not benefit from rankings at all (Ehrenberg, 1999 cited in Meredith, 2004; Zhao, 2007; Marginson, 2009). This results in the so-called Matthew's Effect and a winner-take-all situation in which top scholars and highly ranked institutions are more likely to receive public support.

4.4. Conclusions

Global university rankings are a recent phenomenon in the history of higher education and a controversial indicator of quality in higher education since it first appeared in 2003. Many do not agree that rankings are measuring or indicating quality of higher education in a fair and comprehensive manner. The simplicity of rankings and the global publicity of the annual rankings results have, however, served a general purpose of putting public and international attention on the role and importance of higher education – to societies and to individuals. They have put higher education performance on the policy agenda, and underpinned the necessity for continuous investment in higher education.

Very different sets of indicators are used by global rankings and national rankings to measure higher education quality. Global rankings use a smaller set of indicators than national rankings because of access to data and issues raised above. National rankings use a larger variety of teaching/student-related indicators which are much less standardised than research indicators. This is because there is no single internationally agreed definition of what constitutes quality, especially in teaching and learning quality. The choice of ranking indicators therefore seems to be dependent on existing data, in particular international academic publication data that are readily available through a few global data brokers, or other national data drawn from national surveys.

As a result, global rankings effectively emphasize the importance of measurable research outputs indexed to selected databases. It is unclear whether such indicators actually tell us meaningful information with respect to the measurement and comparison of higher education performance and quality. What is clear now is that these are the measurable and internationally comparable indicators that are easy to obtain today. There are of course many other meaningful indicators, particularly indicators that reflect the teaching and learning quality and the third mission ("service to the community and society") of higher education. However, it is costly, if not impossible, to obtain internationally comparable data for meaningful indicators that fully reflect the context and complexity of higher education systems worldwide.

In the past one decade, ranking providers have been responding to the criticisms of their methodologies and have shown signs of improvement to survive in the booming ranking market. Apart from the countless national rankings that are introduced every year, more than ten global rankings have been identified to date. The proliferation of rankings has called into question the quality of rankings themselves. Instead of creating a ranking of rankings to compare the quality or rankings, a quality assurance approach, called "IREG Rankings Audit", has been taken by IREG in 2011 to enhance the quality, transparency and credibility of rankings. The effect of such an audit is yet to the seen, but judging from the three audits it has conducted thus far, the standards applied in the audits are far from being consistent.

Because of the importance attached to rankings, in particular global rankings because of the global competition discourse, rankings have been acting as performance indicators for many. Overall speaking, evidenced impacts of rankings have been found on student recruitment and admission, higher education marketing, reputation and legitimacy of higher education institutions, governance and operation of higher education institutions, and academic publication practices. They are also found to have more impacts on high-achievers (top students, scholars or institutions) than others, leading to a widening gap of inequality in terms of reputation and resources. Another main effect that has become a concern is the way in which national and institutional priorities have been reshaped in line with rankings, sometimes in dubious manners.

Today, rankings are widely used as part of a package of indicators for strategic decision-making. In doing so, they serve a purpose – but they should never been used alone and governments and institutions should not be slavish to them. After all, the ranking indicators will and do change regularly when rankings themselves struggle to stay on the market. It is of utmost importance to the users of rankings to understand the limitations of rankings and the commercial drives behind the different rankings that may not have been clearly stated by the rankers themselves.

5. CONVERGENCE OF QUALITY ASSURANCE AND RANKING?

KEY FINDINGS

- **QA and rankings have fundamentally different purposes**. The main purpose of rankings is to pick the best. The main purposes of external QA is to guarantee compliance with (minimum) standards and support quality enhancement. Thus, QA covers all HEIs, not only the top segment.
- Rankings primarily measure an institution's **research** quality, QA tends to focus on the quality of **teaching and learning**.
- The **main target groups of QA are public authorities and the HEIs concerned**. The **target groups of international rankings are less clear**. In the case of ARWU, it was initially the Chinese government which needed data on the country's progress towards building world-class universities. THE and QS are predominantly driven by commercial motives.
- The main functions of QA are securing compliance with minimum standards and quality enhancement. **Rankings are viewed as creating a whole set of (mostly unstated and predominantly undesirable) effects**. Hard evidence is in short supply concerning the impacts of both QA and rankings.
- **QA reports** are hard to understand for non-experts, while **international ranking results** appear to be easily readable. This is, however, a 'fake simplicity'.
- **U-Multirank**, a multiple and **user-driven instrument**, was created to do justice to the diversity and complexity of HE. It is an ambitious effort. But its **high degree of differentiation also stands in the way of its readability.**
- There are tendencies of **QA learning from rankings and vice versa**.
- **Both QA and sophisticated, U-Multirank-type instruments are highly staff resource intensive**, both for the quality assurers and rankers, and for higher education institutions.

For the Study, the European Parliament requires an assessment of both quality assurance systems and rankings in Europe. This could be (mis-)interpreted as meaning that both approaches are essentially about the same thing. This is true in as far as both are about quality in higher education (though the meaning(s) of quality in QA and rankings are very different). This apart, the authors' initial hypothesis had been that this expectation is wrong. After our research, we still see very fundamental differences, but we are also seeing some tendencies towards, if not convergence, at least a *rapprochement* of ranking and QA methodologies. This will be detailed at the end of this short chapter. First, however, we need to point out the considerable differences.

5.1. Differences between quality assurance and rankings

The (stated) purpose of most rankings sampled for the Study is to identify 'excellence', in terms of the best HEIs globally or in a given country (with the notable exception of U-Multirank and, at national level, the CHE ranking, U-Multirank's role model). The basic idea is to create a league table, comprising at best the leading five percent of all HEIs in the world. The focus is the top layer of 'elite' or 'world-class' institutions. To put it into soccer terminology: Rankings are about Barça, Real Madrid, Chelsea FC or Bayern München. Second league clubs rarely figure, others not at all. Not to be misunderstood: rankers often have data on more than the 500 universities that appear in their published rankings. Amongst those whose data is stored in the databases, there are likely many second and third league clubs. But they remain invisible in the rankings.

In contrast, QA addresses a country's entire HE system. Although methodologies differ, comprising evaluation, accreditation and audits, the prime function of QA is to secure compliance with minimum quality standards in each programme or institutions. This is especially the case with accreditation (which was, in earlier days, more or less a 'policing measure'). Having said this, the majority of QA systems today combine compliance control with enhancement, thus also offering institutions advice on quality enhancement. Audits in particular are mainly focussing on enhancement.

5.1.1. Research vs. teaching and learning

Global rankings, with a few exceptions, such as U-Multirank, tend to mainly focus on an institution's demonstrated quality in research. Therefore, publications and citations in peer-reviewed journals published in the English language are key indicators, although most global rankings have at least a small share of teaching-related indicators. At the national level, there are even rankings which are first and foremost teaching-related, like the one of the Guardian newspaper in the United Kingdom, the CHE ranking in Germany or the US Best Colleges ranking. One may of course challenge the notion that the prevailing research focus is an 'innate' (or necessary) characteristic of global rankings, or if it is simply the result of cost and opportunity considerations. Chapter 4 demonstrated that the 'classical' global rankings use Thompson Reuters data sets for their analyses. No similar set of (comparable) data exists for teaching and learning and, as the case of U-Multirank demonstrates, direct collection of such data at the level of each HEI meets with considerable problems of comparability and severe resource challenges at the end of both the rankers and those ranked.

QA, in contrast to rankings, does not focus on research, even though most QA approaches cover all missions of a HEI. But the emphasis in QA is rather on teaching and learning. Therefore, the 'catchment area' of QA could never be a few research-intensive institutions only, as is the case in rankings. QA covers the entirety of a country's higher education institutions and programmes. The basic idea is consumer protection: to make sure that students do not fall prey to substandard educational offerings. One may therefore say, at the danger of slightly overstating the case, that QA's main intervention area is the entirety of a country`s higher education institutions and/or programmes (and, amongst them, particularly the set of weaker ones), and not only the group of the shining stars.

5.1.2. Programme- or institutional level

As should have become clear, both rankings and QA can put the emphasis on either the programme or the institutional level.

Global rankings, though not all of them, tend to rank entire institutions (*not* national systems), across the whole range of subject areas and disciplines. Other rankings provide only disciplinary league tables. These can be rankings which only look at a particular subject area or discipline, or, indeed, institutional rankings, for which data at subject / discipline level are being collected and which are published separately.

The recent development in the field of QA has moved from a programme-centred to an institutional approach, even though there are also tendencies in the other direction. The predominant move towards institutional approaches might well have something to do with sheer overload of all concerned in programme-based QA. But it is also driven - and better justified - by the different methodology of supporting the emergence of robust internal institutional QA systems and, overall, a 'quality culture' in Europe`s HEIs.

5.1.3. Target audience

The prime target audiences of quality assurance are public authorities, as well as the HEI in question. This particularly applies to QA approaches which also aim at 'enhancement' and HEIs themselves (to the extent that they comprise 'enhancement' as an objective of the exercise). A secondary target group can be other institutions and the public at large.

The key audiences of rankings are more difficult to make out and they differ between rankings. The ARWU was originally developed as a policy-informing instrument for the Chinese government to measure progress to its self-set objective of growing world-class universities in the country (but is today used, by the research centre in charge of it, as well as students, parents and further constituencies, for other purposes, too). The rankings THE and QS claim to inform decision makers in HE and in government, as well as the general public, about the quality of the world's leading universities, even though secondary considerations (increasing or at least maintaining the customer base of the media companies' products as well as generating income from advertisements) certainly play an important role. U-Multirank, which claims not to be a ranking in the traditional sense at all, sees itself as a source of transparency, for a wide range of audiences, inclusive of intending students.

5.1.4. Effects – intended and other

As Chapter 3 clearly demonstrates, there is very little research on the impacts of QA, and, as a result, little evidence. This notwithstanding, there is a widely shared belief that quality assurance achieves what it intends, i.e. to guarantee compliance with minimum standards (accountability) and to help institutions and programmes to enhance the quality of their educational provision (enhancement).

There is a wide range of effects of rankings, some researched to a considerable extent, some just feared. The biggest fear concerns the potential danger rankings might have for the 'bio diversity' of higher education systems. By opportunistically positioning themselves with a view to the indicators which rankings use, the HE landscape is dreaded to be levelled out and become uniform. The second danger concerns widespread misinterpretation of what rankings can inform about: they are often misunderstood to be able to inform on the quality of teaching and guide student choice. This may not be intended by the rankers, but it remains a danger nonetheless. Third, there have been instances where HEIs select for - national or international - partnerships and alliances only HEIs listed in the rankings, sometimes only in the top 100 or 200. Not that such opportunistic behaviour of 'marrying up' is new in the world. Fourth, it appears that governmental funding decisions or anyway funding levels are sometimes made dependent on an institution's rank in the global league

tables. The same has been observed for the award of student grants and scholarships (Norway's Lanekassen, for example).

5.1.5. Readability and simplicity

In most countries, there is the habit to publish at least a short summary of QA reports. This notwithstanding, the reports are often difficult to find. On top of this and probably unavoidably, they are full of specialist QA terminology. This renders them 'opaque' and thus fairly incomprehensible for the layman. Whether this is a problem is contestable. The main target audience is the government, public authorities and the HEIs, which are familiar with the language used. If one regards intending students as a secondary target group, the 'unreadability' of QA reports could indeed be a problem.

Unreadability is not, at first glance, a problem that global rankings have to grapple with. They appear to be wonderfully self-explanatory to almost anybody, by neatly positioning the ranked institutions on a hierarchical scale. But since - non-expert - readers are often ill-informed about or not interested in the information behind the ranks and since the classical global rankings (or rather, the hierarchical presentation of their results) often inflate minor differences, they tend to produce a 'fake simplicity' and often de facto misguide (without necessarily intending to do this). They also display an - in tendency – dangerous (over-) reliance on Thompson Reuters' databases.

This is why U-Multirank is, in principle, the intellectually far more honest and sophisticated methodology. U-Multirank is multi-dimensional and user driven, with everybody in principle able to create their own rankings. But the high degree of sophistication and complexity of U-Multirank also stands in the way of its easy readability - and thus has the potential to be self-beating. This is likely to develop into a medium or long term communication and visibility problem. It is simply not possible to fit into a short headline who is the 'leader of the pack'.

5.1.6. Cost and resources

We are not aware of any systematic research on the cost of quality assurance. But it is clear that the HEI staff resources for the preparation of the self-assessment report and the resources of the external staff producing the QA report are considerable. On top of this comes direct cost (for travel and accommodation, for example). It seems plausible to assume that the 'unit costs' of institutional audits are lower than those carried out at programme level (cf. Wissenschaftsrat, 2012, pp. 143-146). Also, a high-frequency approach is bound to be more costly than one where time intervals are bigger. Regardless of this, QA is under constant pressure of legitimacy. Since it is costly and a heavy burden on staff resources of HEIs, the latter must remain convinced of a real added value in terms of quality enhancement. The moment HEIs start to regard QA as empty pointless bureaucracy, it will no longer serve its purpose.

We are likewise at a loss about the cost in the case of rankings. The big global rankings pull most of the data they use from the database of Thompson Reuters. This saves them the immense cost of collecting information from the source (i.e., the individual HEI). It also reduces the need for human resources at the level of the HEI. This is why the cost of producing U-Multirank must be very high (for the rankers, but also for the HEIs). It requires a wider and partly different data set than the ones used by the other global rankers. As a consequence, it needs to collect data from the source. As a result of possibly this, but also of low institutional participation, it has recently started to fill in data gaps with

Thompson Reuters' data. This is understandable, but it of course has the potential to undermine U-Multirank's unique sophisticated approach.

5.2. Interrelation of quality assurance and rankings

We started this short chapter with the assumption that QA and (international) rankings are very different in almost any respect. By and large, the previous section (5.1) has confirmed this hypothesis. But there are also some areas where QA and rankings move closer to each other.

The original main purpose of QA was to guarantee compliance with minimum standards (mostly in accreditation) and thus help avoid that substandard institutions, programmes or providers were allowed to operate. Soon, the purpose of (help to) quality enhancement was added, so that today, compliance and enhancement are two sides of the same QA coin. Together with audits carried out in particular thematic areas, which some QA agencies are developing in order to increase their portfolio (perhaps outside their core mission), the field of QA has moved towards a higher degree of 'sophistication'. As Chapter 3 made clear, some quality level classifications contain a category which we would like to label here 'better than required'. With moves like this, the border to the area of 'excellence', which rankings classically view as their habitat, is being overstepped.

Global rankings, on the other hand, today show a tendency towards more sophistication than a few years ago. This is probably largely due to the positive system provocation which U-Multirank resulted in. The traditional global rankings like ARWU, QS and THE are moving 'U-Multirank-way', or would at least want to be perceived as doing so. Without doubt, they will not go the whole way, and U-Multirank will need to move some way in their direction, in order to gain in credibility and readability, and to solve the resource issue. It is also noteworthy that some of the international rankers have created the Observatory on Academic Ranking and Excellence IREG, which works along QA lines and awards a label of compliant ranking providers. In other words, IREG uses QA methodology to assure the quality of rankings.

6. RECOMMENDATIONS

The Study was to comparatively analyse the current methods and approaches in Europe in the area of QA on the one hand and in the field of rankings on the other, giving special attention to the indicators used in both. Part of the requirements of the European Parliament was the delivery of recommendations for the further development of transparent quality assessment and assurance systems (research questions 4 and 8) and, indirectly, for the future development of rankings in general and U-Multirank in particular (research question 9).

Recommendations on quality assurance

REC 1: Further promote the European dimension of quality assurance

Given the massification and internationalisation of higher education and the increasing competition for talent, the European dimension of quality assurance should be further promoted. This is expected to enhance the performance and attractiveness of European HEIs. Instruments such as the European Standards and Guidelines (ESG), the European Quality Assurance Register (EQAR), international dialogue forums (EQAF), the coordinated collaboration at the European level (ENQA and the E4 group) and the related international and national projects will be of utmost importance to create transparency and advance quality in European higher education. The outreach and publicity of these instruments should be strengthened, including all levels of quality assurance, i.e. European institutions, national QA agencies, universities (especially quality assurance units), faculties and study programmes.

REC 2: Support the creation of a quality culture in higher education institutions

The proper emergence of a quality culture at university level may become the key for quality and competitiveness of the European higher education sector. Quality in higher education will only become sustainable if appropriate organisational structures are set up within the institutions responsible for education provision. In this context, it is recommended to support less bureaucratic and more enhancement-oriented approaches attributing primary responsibility for quality assurance to the higher education institutions.

REC 3: Facilitate quality assurance approaches responding to the rapidly changing higher education landscape

The European and national quality assurance frameworks and systems need to react to the challenges and trends in higher education, such as life-long learning, massive open online courses, e-learning, the increasing focus on learning outcomes, and cross-border education, to name a few. To respond to those changes, it is advisable to further include representatives of HEIs in the political dialogue on quality assurance. Furthermore, the existing flexible 'soft regulation' laid down in the ESG is much appreciated since it allows member states to opt for the external quality assurance system most suitable for their context while complying with the shared framework.

REC 4: Explore further opportunities for external quality assurance agencies to go beyond measuring compliance with minimum standards alone

While compliance-oriented quality assessment systems are certainly necessary for less mature education sectors, other systems may give a stronger focus to quality enhancement. Research undertaken in this Study showed that some systems additionally

provide excellence labels or promote the formation of profiles for universities or study programmes through assessing distinct quality features. Highlighting of specific features will better market universities and their programmes and contribute to the diversity and attractiveness of the European Higher Education Area.

REC 5: Cautiously promote the idea of a European quality assurance area

The promotion of cross-border quality assurance needs to take into account political and legal hurdles at the national level, language barriers and related risks. Enabling cross-border quality assurance activities and applying supranational standards, namely the ESG, will contribute to the openness of the system, and can support the internationalisation of QA. To achieve a higher level of internationalisation in quality assurance, a wide variety of initiatives from the operational to the policy level should be promoted. These include, for example, a higher degree of involvement of foreign reviewers, allowing higher education institutions to opt for foreign agencies for mandatory assessments, and most of all, international cooperation projects in the field of quality assurance, facilitating sharing of good practice. Initiatives should be accompanied by political dialogue allowing for exchange, mutual learning, and further building of the systems.

REC 6: Encourage QA agencies to put more emphasis on accessibility and comprehensibility of quality assurance outcomes

The ESG expect reports to be easy to find and to be written in an understandable way. This is not yet always the case, which limits the transparency of quality assurance. We therefore recommend producing, in addition to the comprehensive technical reports, short and comparable summaries allowing all readers to immediately recognize the main outcomes of any quality assessment. A further step might be to collect such summaries on a European web-based platform, thus providing better access to the results of quality assessments undertaken.

REC 7: Support empirical research on impacts of quality assurance

Evidence on the impact of quality assurance is scarce. Therefore, empirical research in this field is desirable to get a better basis for effective quality mechanisms. Such research should take into account feedback from various stakeholders to avoid a narrow view on the topic.

Recommendations on rankings

REC 8: Improve information about what rankings measure

Global rankings of the likes of ARWU, THE, and QS are there to stay. The point of no return has long been passed; a return to ranking-free HE is inconceivable. This is not as such a problem. Most rankings do a decent – though sometimes reductionist – job. Serious problems arise from the uses and abuses of rankings, for purposes the rankings were not designed for, and from misunderstandings about what the rankings can tell us – and what not.

We therefore recommend the provision of easy to understand information on the methodology of rankings, e.g. indicators and the weightings used by each ranking, data collection limitations and the potential misrepresentation in ranking visuals, amongst others. Some such information is already now available on the websites of the single rankings, but a comparative overview is lacking. The information should be provided on one single website, operated by a future quality assurer of rankings (see REC 9).

REC 9: Create an independent quality assurance mechanism for rankings

There is a need for QA of rankings and ranking providers. The nucleus of such an organisation exists already, in the guise of the IREG Observatory on Academic Ranking and Excellence. It offers an audit which leads to the label "IREG approved". Even though we have no indication at all of a lack of quality of IREG's work, we would like to point out that its structure entails a potential conflict of interest. IREG is a membership organisation, and the providers of the main international rankings are members of IREG.

We would recommend the creation of an independent European ranking watchdog mechanism, which would provide soft regulation and develop, in parallel to the ESG in QA, a set of minimum European standards for ranking methodologies. This mechanism should involve the relevant HE stakeholders and it should also be entrusted with the information tasks mentioned in REC 8.

REC 10: Scale down and simplify U-Multirank

As a result of the observed shortcomings of the traditional global rankings, and on the basis of a national-level ranking of Germany's CHE as well as Leiden's global university ranking, U-Multirank has been developed. U-Multirank is no doubt the so far most ambitious attempt to create a ranking methodology which does justice to the complexity of global higher education, in terms of different institution types and missions. It is multifocal and user-driven, and it contains far more indicators than any other global or national ranking, and particularly in the area of teaching and learning, regional engagement and knowledge transfer. It has already had the effect of pushing the traditional rankings into more differentiation. But U-Multirank's sophistication is also its Achilles' heel. It has a tendency to become self-defeating.

We would recommend to – at least temporarily - scale down the ambition of U-Multirank, in order to become sustainable. This could involve various simplifications, for example a possible reduction in the number of indicators – in order to reduce the considerable burden of data collection and data delivery on HEIs participating in the project. For the same purpose, it is suggested that U-Multirank learn from the 'classical' rankings, as contradictory as this might sound. U-Multirank should try and work towards partnerships that supply most of the data needed – also and particularly on teaching and learning. The OECD, through its AHELO project (Assessment of Higher Education Learning Outcomes), which after a pilot phase is going ahead now apparently, or the HEInnovate project (of the EU Commission and the OECD), could be potential partners.

REC 11: Create a business model for U-Multirank

U-Multirank has so far been funded as a project by the European Commission. We understand that the current funding period runs out in 2017 and that U-Multirank will then need to develop a new business model.

With its current approach of data collection at the institutional source (at least for data on teaching and learning), U-Multirank is a resource-heavy project. This applies to the rankers. It equally applies to the HEIs, which is viewed as one important reason for sluggish participation of HEIs – in Europe and world-wide. While the identification of new funders – perhaps from a consortium of European and or global charities - could solve the problem on the side of the suppliers, it will hardly solve the one at the HEIs' end. This is why we believe that U-Multirank would need to find a central source which would provide it with most of the data on teaching and learning – possibly AHELO.

REC 12: Enhance U-Multirank's visibility

U-Multirank has a high visibility amongst international HE experts and policy makers, because of its very ambitious nature. It has also occasionally made the headlines and thus become visible to the general public, though sometimes also because of the difficulties it encountered. However, the PR approach of U-Multirank is low key, which is why it is unlikely to ever become a global brand.

We are aware that U-Multirank was created as an alternative to international rankings driven by media companies. However, we would still recommend exploring the possibilities of a partnership (between equals) with a media company. After all, one of the partners of the U-Multirank consortium has close links to one of the largest international media companies in the world.

REC 13: Research on Indicators of Teaching Quality

In order to strengthen the role and weight of teaching and learning in international rankings, more research on adequate and internationally comparable indicators for the quality of teaching appears desirable, even necessary. While U-Multirank's indicators display progress in this direction, there is still much scope for improvement. Such research would of course also need to look at the feasibility for developing usable indicators.

Should it be possible to define a set of usable key indicators, the next step would be the creation of a global data collection and feeding into an international database, to be run by trusted international actors, like the EU, the OECD or the UNESCO.

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ANNEX

ANNEX 1: LIST OF PERSONS INTERVIEWED

ANNEX 2: SEMI-STRUCTURED INTERVIEW QUESTIONNAIRE

ANNEX 3: COUNTRY LEVEL ANALYSIS QUALITY ASSURANCE

ANNEX 4: RANKING RELATED INFORMATION

ANNEX 1: LIST OF PERSONS INTERVIEWED

NAME	POSITION	ORGANISATION	COUNTRY	INTERVIEWER	DATE OF INTERVIEW
Aerden, Axel	Policy Advisor International Affairs	NVAO	The Netherlands	Maria Kelo	30 January 2015
Dragojević, Đurđica	EU Project Manager	ASHE	Croatia	Maria Kelo	22 January 2015
Jackson, Stephen	Director of Reviews	QAA	United Kingdom	Maria Kelo	29 January 2015
Kekäläinen, Helka	Secretary General	FINEEC	Finland	Maria Kelo	28 January 2015
Kwiatkowska-Sujka, Izabela	Deputy Director	PKA	Poland	Maria Kelo	29 January 2015
Leetz, Friederike	Programme Manager	GAC	Germany	Maria Kelo	30 January 2015
Llavori, Rafael	Head of International Relations	ANECA	Spain	Maria Kelo	29 January 2015
Sârbu, Oana	Expert	ARACIS	Romania	Maria Kelo	21 January 2015
Prof. Dr. Ziegele, Frank	Managing Director	Centre for Higher Education (CHE)	Germany	Bernd Wächter	26 February 2015

ANNEX 2: SEMI-STRUCTURED INTERVIEW QUESTIONNAIRE

Verification of information in the country reports

- Are there any comments, changes or missing key information as to the country reports elaborated by the Study team and sent beforehand to the interviewee - both in general and as to specific features covered (e.g. assessment methodologies, procedures, outcomes)?

Consequences and impacts of QA

- What are the main purposes of external QA in the national context (guarantor, support for improvement, public confidence, information provision…)?
- What are the expected outcomes of (E)QA? To what extent are the expected outcomes achieved and how is that measured?
- What if any main unintended outcomes of EQA can you observe/perceive in your country/HE system?
- Is feedback collected from stakeholders on the efficiency and purposefulness of the existing system? What are the main issues raised? How satisfied are the stakeholders (differences between groups?) about the current system?
- Do the perceptions on the impact vary between different user and stakeholder groups (the agency, the national authorities, the HEIs, the students…)?

Main challenges for the successful implementation of QA in the country

- What are the major challenges in effectively implementing an (ESG compliant) QA system in the country? Are there conflicting interests and/or approaches between the HEIs and the ageny/ies?
- What if any relevance and use has the European framework of QA for you/your national system?
- Does the national legislation include elements that are an obstacle to fulfilling the requirements of the (revised) ESG? Will something need to change?

Recent developments, current "hot topics" and vision for the future of QA in the country

- Have there been any recent changes to the (E)QA system? Or are any planned for the near future? If yes, what and why?
- What are the current "hot topics" in QA in your country?
- How do you see the development of QA in the next 10 years? What would need to change and why?

ANNEX 3: COUNTRY LEVEL ANALYSIS QUALITY ASSURANCE

ANNEX 3A COUNTRY REPORTS

EU Countries
Croatia
Finland
Germany
Netherlands and Flanders
Poland
Romania
Spain
United Kingdom

Non-EU Countries
Brazil
Japan
United States

ANNEX 3B COMPARISON OF EU QUALITY ASSURANCE SYSTEMS

(based on Bologna Stocktaking Reports 2012)

COUNTRY REPORT CROATIA

The Agency for Science and Higher Education (ASHE) is the single independent Croatian quality assurance agency. The main tool for quality assurance is accreditation of institutions, programmes being covered in the institutional review. Other forms of QA are thematic evaluations and quality audits of HEIs' internal QA systems. Quality assurance in Croatia is oriented at and compliant with the ESG. While initial accreditation assesses the compliance with minimum standards, re-accreditation includes a quality grading for each criterion. Accreditation is a prerequisite for the operation of programmes/institutions. Funding is only connected to the accreditation outcome in case of study programmes offered by public universities.

Higher Education System Croatia

Croatia has a population of 4 million (Eurostat, 2014a). 157,300 Croatians are enrolled in tertiary education (Eurostat, 2014b). 10,000 Croatian students study in another EU, EEA or candidate country; the number of 300 incoming students is the lowest in the EU along with Malta (Eurostat, 2014c). One of four Croatians held a tertiary degree in 2014, which is below the national target of 35 percent and the EU target of 40 percent for 2020 (Eurostat, 2014d).

Quality Evaluation and Assurance System Croatia

Institutional dimension

Quality assurance in Croatia has the purpose of quality enhancement of higher education and science; the provision of respective information to students, higher education institutions (HEIs) and the public; and development of a quality culture which contributes to competiveness of Croatian higher education and science by comparison with national and EU best practices (Agency for Science and Higher Education, 2010a, pp. 11-12). Specific to the Croatian approach to quality assurance is the explicit inclusion of research (science) in addition to education. As another characteristic, public higher education institutions are allowed to accredit their study programmes themselves, whereas programmes offered by private universities, polytechnics and colleges are subject to external accreditation.

Quality Assurance Entities and Responsibilities

A single independent national agency is responsible for quality assurance of Croatian higher education and science. The Agency for Science and Higher Education (ASHE) is full member of the European Association for Quality Assurance in Higher Education (ENQA) and listed in the European Quality Assurance Register for Higher Education (EQAR).

International Activities

While Croatian higher education institutions (HEIs) are allowed to undergo additional assessments by other agencies, only the accreditation of ASHE has legal validity in Croatia (EHEA, 2012a). ASHE may carry out external audits in other countries that allow EQAR registered agencies to operate. One such international assessment is currently (Status: January 2015) taking place (in Slovenia).

ASHE was developed in the context of Croatia's EU accession and therefore benefitted from various EU programmes. For this reason the agency is traditionally embedded in

international networks and activities: it is member of the International Network for Quality Assurance Agencies in Higher Education (INQAAHE), the Central and Eastern European Network of Quality Assurance Agencies in Higher Education (CEENQA), the European Consortium for Accreditation (ECA), CHEA International Quality Group, the Organisation for Economic Co-operation and Development Institutional Management in Higher Education Forum (OECD IMHE). In addition to this, the agency is an observer member of the Asia-Pacific Quality Network (APQN) and has participated in a number of international projects and working groups launched by these organisations. The agency intends to be an active member of the international quality assurance system (Agency for Science and Higher Education, 2013b). ASHE is also host of the Croatian ENIC/NARIC office.

Legal dimension

Quality assurance of higher education in Croatia is based on the Act on Quality Assurance in Science and Higher Education (Croatian Parliament, 2009). The act complies with the European Standards and Guidelines for Quality Assurance in the European Higher Education Area (ESG) (Agency for Science and Higher Education, 2010b, p. 4). ASHE conducted an internal audit and underwent an external review in 2011, which attested "that ASHE's overall performance against the standards of the ESG is very high" (ENQA, 2011, p. 3). The external review of ASHE resulted in the agency's full membership in ENQA.

Methodologies of quality assessment

Key operating principles

In its strategy ASHE highlights values underlying its work (cf. Agency for Science and Higher Education, 2010a, p. 11). These are, among others: Judgements and decisions shall be based on evidence (reliability); the agency is accountable for its work to society as a whole (accountability); ASHE adapts its approach to new and specific requirements (flexibility); the work and working results of ASHE are supposed to be accessible in order to build the trust of the users of its services (openness).

Types of Assessment

Quality assurance is conducted at the level of study programmes and institutions and covers both higher education and research. The following types of quality assessments can be distinguished in the Croatian system (cf. Dodiković-Jurković, 2013):

1. Accreditation
1.1 Initial accreditation of study programmes and institutions
1.2 Re-accreditation of study programmes and institutions
2. Thematic evaluation of study programmes and organisation units in institutions
3. Audits of institutions

1. Accreditation

Accreditation comprises initial accreditation of new programmes and institutions and re-accreditation of established programmes and institutions. While initial accreditation assesses the fulfilment of minimum standards, re-accreditation applies a quality grading.

1.1 Initial accreditation

All new study programmes offered by private HEIs as well as polytechnics and colleges are subject to initial accreditation; study programmes of public universities are accredited by the HEIs themselves. Public and private HEIs must be accredited by ASHE (EHEA, 2012a; Kanazir, Papadimitriou and Stensaker, 2014, p. 19-20). Initial accreditation examines the compliance of new study programmes, new HEIs as well as new research organisations with minimum criteria. The procedure and specific rules for initial accreditation of programmes and institutions were laid down by ASHE in 2010 (Agency for Science and Higher Education, 2010c). The following Bologna issues are considered: Teaching, student support services, research, employability, internal quality assurance (Ehea, 2012a).
Concrete minimum standards to be fulfilled refer to (cf. Dodiković-Jurković, 2013, pp. 18-19; Ministry of Science, Education and Sports, 2010, Article 5; Agency for Science and Higher Education, 2013a, p. 5):

Quality criterion	Explanation
Study programmes	
Report on the study programme	The panel looks at the content of the study programme, and the feasibility study to check the strategic rationale for its establishment
Adequate facilities and equipment	Proof thereof
Appropriate number of concluded work contracts with scientific or teaching staff	Proof thereof
Funds have been secured	Proof thereof
Colleges and polytechnics	
PHASE I	
The newly established institution finds a mentoring institution, pre-existing and accredited and delivering accredited programmes in a similar field, and works with it for 2 years	Proof thereof
PHASE II	
After the completion of the mentoring period, the institution can launch accreditation of its own programmes according to the above criteria	

Quality criterion	Explanation
Additional criteria for universities and other research organisations[9]	
A strategic research programme in the area of teaching	Must be available for at least 5 years
An adequate number of researchers with an adequate number of publications	At least 15 researchers, at least 5 in a field of research relevant to the institution
Adequate research equipment and facilities	Evidence of adequate working space must be provided
Sufficient funds allocated to research	A financial plan must be provided

Accreditations by ASHE are valid for five years (Kanazir, Papadimitriou and Stensaker, 2014, p. 13).

1.2 Re- accreditation

Re-accreditation is mandatory for all public and private HEIs and all scientific organisations. Study programmes are not re-accredited individually but are covered within the institutional re-accreditations (Agency for Science and Higher Education, n.d.b, p. 15). Institutional accreditation can also refer to departments at HEIs instead of whole HEIs.[10] The first cycle of re-accreditations started in the academic year 2010/11 and is expected to be finished by the end of 2015/16. The procedure for re-accreditation was formulated in 2009 (Agency for Science and Higher Education, 2012). It includes the steps common in most European accreditation procedures: self-assessment, site visit, reporting, follow-up (Dragojevic, n.d.). The re-accreditation first checks compliance with minimum criteria (see below) but has a wider scope than initial accreditation. It includes additional quality criteria and applies a grading system for each criterion (Dodiković-Jurković, 2013, pp. 20): Not implemented, starting phase of implementation, partly implemented, mostly implemented, fully implemented. The grading system applies to a group of seven criteria (cf. Agency for Science and Higher Education, 2013c; Agency for Science and Higher Education, 2013d).

Quality criterion	Explanation
Minimum criteria	
Number of full-time staff employed	At least 50 (universities)/33 (all other HEIs and private universities) percent of study programmes conducted by teachers employed at the institution/own teachers
Teacher/student ratio	At least 1:30
Equipment and space per student	Number of copies of literature at least 20 % of anticipated number of students per course; at least 1.25 m^2 per student

[9] Research organisations include (Agency for Science and Higher Education, 2013a, p. 5): Universities and their constituents, public research institutes, research institutes, Croatian Academy of Sciences and Arts, and other legal entities and their constituent units listed in the Register of Scientific Organisations (Article 22 Item 1).

[10] 'Higher education institutions' refers to universities (and their faculties if it is not an integrated university) as well as colleges and polytechnics.

Quality criterion	Explanation
Additional criteria	
1. Institutional management and quality assurance	"The institution, through its mission and other documents, clearly identifies itself as a higher education institution. The mission of the higher education institution is to contribute to the development of the society by developing education, research and other aims defined by the specific characteristics of a higher education institutions and its position in the society. Higher education institution is dedicated to developing quality culture and social responsibility." (Agency for Science and Higher Education, 2013c, p.1) 8 single criteria
2. Study programmes	"Each study programme is defined in line with the clearly defined student learning outcomes and international standards, and is based on scientific potentials. Mechanisms for approving, monitoring and development of programmes and qualifications are in place." (ibid, p. 3) 10 single criteria
3. Students	The "HEI ensures the quality of the enrolled students by appropriate selection process, monitoring student progress and various forms of support." (ibid, p. 5) 8 single criteria
4. Teachers	"There is evidence that higher education institution employs sufficient number of qualified teaching staff to achieve its educational and research objectives, to establish and monitor academic policies, and to ensure the sustainability of its study programmes and research activities." (p. 6) 6 single criteria
5a. Research and professional activity	Colleges and polytechnics: "The institution carries out regular professional activity, the result of which is a contribution to the development of the economy and the profession" (Agency for Science and Higher Education, 2013d, p. 7) 4 single criteria
5b. Scientific and professional activity	Organisations registered in the Register of Scientific Organisations: "Basic, applied and/or developmental research is being regularly conducted at HEI, resulting in original scientific work that contributes to knowledge, development of society and economy." (ibid, p. 8) 10 single criteria
6. Mobility and international cooperation	"Since the higher education institution operates within an international environment, there are rules, procedures and resources supporting international activities in place." (Agency for Science and Higher Education, 2013c, p. 9) 7 single criteria
7. Resources: Administration, Space, Equipment and Finances	"There is evidence that adequate funds can be secured for the success of all the stakeholders and continuity of institutional activities." (ibid, p. 10) 8 single criteria

The table shows that for universities as well as colleges and polytechnics listed in the Register of Scientific Organisations further criteria are applied to measure their performance in research. Another characteristic is the inclusion of internationalisation in quality assurance.

2. Thematic evaluation of study programmes and organisation units in institutions

Thematic evaluations are carried out to evaluate or analyse a specific topic across the whole HE/research system of the country. They are carried out on the basis of a decision by the Accreditation Council – or upon suggestion by the Minister, an institution's student union, or an institution itself (Croatian Parliament, 2009, Article 24).

3. Audits

Audits assess the degree of development and efficiency of the institutions' internal quality assurance systems. They are to be carried out every five years (Croatian Parliament, 2009, Article 23). The procedure is in detail described in the Manual for Audit of Higher Education Institutions in the Republic of Croatia (Dodiković-Jurković, V. and Petrović, V., 2010, pp. 9-17). Like accreditations, audits consist of a self-assessment, a peer review via site visit, a report and a follow-up procedure. The criteria applied are explicitly linked to the ESG part 1 (Dodiković-Jurković, 2013, p. 24). Conformity with the following ESG standards is assessed (Dodiković-Jurković and Petrović, 2010, Supplement 1):

- **ESG standard 1.1**: Policies, mission, vision, general strategy of the institution/sub-strategies; Goals, overall structure and internal cohesion of the quality assurance system; documentation – including the quality policies, procedures and responsibilities of all the stakeholders – is published.
- **ESG standard 1.2**: Approving, monitorin, periodical revision of programmes / levels.
- **Additional standard**: Monitoring and evaluation of scientific research and development.
- **ESG standard 1.3**: Student grading
- **ESG standard 1.4**: Quality assurance of teaching staff and its interaction and influence on the society of knowledge, and contribution to the regional development.
- **ESG standard 1.5**: Resources for study and student support.
- **ESG standard 1.6**: Importance and availability of quality assurance system data.
- **ESG standards 1.7**: Informing the public.

For each ESG criterion the level of development and efficiency is measured on a four-point scale (cf. Dodiković-Jurković & Petrović, 2010, p. 7):

Degree of development	Explanation
Phase I: Preliminary phase	Quality assurance system is in preparation (documentation is in making, agreements are reached on the level of the institution)
Phase II: Initial phase	Quality assurance system is set but not functional (basic documents are drafted)
Phase III: Developed phase	Quality assurance system is functional, internal audit has been carried out and system is being improved on the basis of its results
Phase IV: Advanced phase	Quality assurance system is continuously improved on the basis of the results of internal and external audits.

Reasons for Adopting the Current System

The Croatian quality assurance system was established along with a general (higher) education reform in light of the country's EU accession: "Accession to the European Union includes the assumption that Croatia has its own educational system, and its quality is approaching the level of those in the member states." (Rakić & Milanović Litre, 2005, p. 9) In order to comply with EU requirements, Croatia has implemented the Bologna reforms since 2001 (Dodiković-Jurković, 2013, p. 4). Thus, quality assurance in Croatia can be seen as part of the country's overall education reform that has been taken place since the early 2000s (cf. Rakić & Milanović Litre, 2005, pp. 32-34; Vukasovic, 2014). In this regard, "accreditation has been acknowledged as an instrument to improve higher education in selected countries in order to get closer to more developed countries and their HE, and to demonstrate their capability in reforming conservative and ineffective HE from early 2000s." (Kanazir, Papadimitriou and Stensaker, 2014, p. 8)

Stakeholder Involvement

All key stakeholders participate in external quality assurance (EHEA, 2012a). Students participate equally at all stages: they are represented as members of the agency Accreditation Council, full members of the review teams, reporting and decision making. Academic staff is represented at all stages. Employers are members of the Accreditation Council, and peer panels when deemed relevant. International peers are strongly involved in all stages (cf. Agency for Science and Higher Education n.d.b., pp. 11, 16-20). The inclusion of international peers reflects the ASHE's international orientation: "One of the most important segments of ASHE's work is its international activity and positioning in the European, but also global surroundings. The aim of these activities is to connect and network, exchange experiences, improve performance and contribute to the recognition and recognisability of Croatian science and higher education." (cf. ibid, p. 8)
All participants of site visits have to undergo training (Agency for Science and Higher Education, 2012, Article 3.4).

Outcomes of quality assessments

Publication of Outcomes

The outcomes of accreditations as well as evaluation and audit reports are published in Croatian and English on ASHE's website. In case of positive accreditation the institution is listed in the Ministry of Science, Education and Sports (MSES) Register of Accredited HEIs, in case of negative outcome it is absent therein (EHEA, 2012a). For re-accreditations all documents of the procedure as well as the quality grading are published on the ASHE website (Agency for Science and Higher Education, 2012, Article 3.9).

Possible outcomes, follow-up procedures and consequences

All final decisions on the outcomes of the quality assessments are passed by the Agency's Accreditation Council, which is made up the representatives of HEIs (teachers and students), business and the civil society.

Initial accreditation has two possible outcomes: issuing or denying a license for the implementation of a proposed study programme (Agency for Science and Higher Education, 2010c, Article 3.7). Re-accreditation combines the pass/fail decision with a quality grade and can have three outcomes: issuing a license, denying a license or issuing a letter of expectation with the deadline for resolving deficiencies up to 3 years. In case of a letter of expectation the HEI must send a report to ASHE which explains the improvements made.

Based on this report the Accreditation Council decides whether an additional site visit is necessary. Based on the HEI's report and the potential site visit, a license for higher education (and research) activity is either issued of denied (Ibid, Article 3.10; Dodiković-Jurković, 2013, pp. 21).

Accreditation is a prerequisite for a programme/institution to operate. Funding is only connected to the accreditation outcome of study programmes offered by public universities (EHEA, 2012a).

The outcome of an audit is a report with recommendations for enhancement of an institution's internal QA system as well as a certificate issued by ASHE if assessed positively, or re-audit if assessed negatively (Croatian Parliament, 2009, Article 2(8)). The outcome of a thematic evaluation is an evaluation report containing the results of the review. A negative review can result in a re-accreditation procedure initiated by ASHE or suggested by the Minister (Croatian Parliament, 2009, Article 24).

Major Challenges, Recent Developments and Outlook[11]

Some of the challenges facing the Croatian QA system from the national agency's point of view include (cf. Dragojević, n.d., p. 19): They relate to the further development of the re-accreditation and audit methodology on the basis of meta-evaluations which are supposed to be be completed after the 1st cycle of reaccreditation is over (in 2015); key aspects include the implementation of Croatia's national qualification framework, a stronger focus on learning and research outcomes and employment of graduates as well as QA of specific learning models such as transnational education and joint programmes. Further key issues include a development of methodology for inter-institutional comparison. Moreover, ASHE is engaged in the further development of a quality culture and the improvement of the standing of Croatian HE in international comparison. Finally, another development of ASHE's future work will probably include the collection and analysis of more comprehensive data to enable better evidence–based policy making.

[11] Parts of this paragraph have been edited by a representative of the agency. The changes have been fully accepted by the research team.

COUNTRY REPORT FINLAND

The Finnish Education Evaluation Center (FINEEC) is the single independent government agency responsible for quality assurance – both in higher education and other educational sectors. The Finnish higher education quality assurance system is characterised by a quality enhancement approach. The main objects of quality assurance are the higher education institutions and their QA systems. Quality assurance systems and their assessment can be adapted freely, within a set framework, to the needs of the individual institution. If an institution does not pass the FINEEC audit, this does not imply any negative consequences in terms of government funding or admission; however, the reputation of the institution may be affected. As result of the evaluation, FINEEC provides recommendations as to the improvement of the system and the education services offered by the institution.

Higher Education System Finland

Finland is one of the smallest countries in the European Union in terms of inhabitants with a population of approximately 5.4 million people (Eurostat (2014a)). About 310.000 are enrolled in tertiary education (Eurostat (2014b)) of which 170.000 in a university, 140.000 in a polytechnic or university of applied sciences (Statistics Finland (2014b)). Thus, 0.05 percent of the poluation currently attend higher education. Of those, 9000 are studying in an EU country other than Finland (Eurostat, 2014c). In EU comparison, Finland has a rather high tertiary educational attainment rate. In 2014, 45,1 percent of the population have successfully completed their studies. Thereby, Finland has already exceeded the target established in the Europe 2020 strategy of increasing the share of 30 to 34 year olds possessing a higher education degree to at least 40 percent (Eurostat, 2014d).

Quality Evaluation and Assurance System Finland

Institutional dimension

Quality Assurance Entities and Responsibilities

In Finland, the Finnish Education Evaluation Center (FINEEC) is responsible for quality assurance in all educational sectors, from early childhood education to higher education. FINEEC is an independent government agency. Its duties are defined in Act 1295/2013 and decree 1317/2013 of the Finnish government (FINEEC (2014a)).

FINEEC in its current form has started its operations in May 2014. Before, three separate institutions were in force, each with clearly separate responsibilities: the Finnish Higher Education Evaluation Council (FINHEEC, founded in 1996), the Finnish Education Evaluation Council and the Finnish National Board of Education. The objective behind the merging of the three institutions was to "consolidate evaluation activities crossing educational level boundaries" (ibid.).[12]

[12] Note: FINHEEC and FINEEC are used interchangeably, depending on whether a source has been published in the name of FINHEEC or FINEEC.

Higher education institutions are, by the Polytechnics Act (2009) and the Universities Act (2009), obliged to undergo external evaluation on a regular basis. They are however not required to have the evaluation carried out by FINEEC.

International Activities

The predecessor and one of the institutions that have been merged into FINEEC, the Finnish Higher Education Evaluation Council (FINHEEC) applied successfully for ENQA full membership first in 2000. The Finnish Education Evaluation Center as legal succeeding body of FINHEEC is recognised by ENQA as full member (ENQA, 2014).

FINEEC is also listed on EQAR. The current listing is valid until 2016 (EQAR (2014b)). Naturally, FINEEC has to abide by the rules and regulations of ENQA and EQAR and renew its membership respectively registration regularly.

Finally, FINEEC is competent to award the European Accredited Engineer (EUR-ACE) quality label as developed and administered by the European Network for Accreditation of Engineering Education, ENAQEE (FINEEC (2014b)).

Legal dimension

As mentioned in the previous section, Finnish higher education institutions are bound by the Polytechnics and the Universities Act to undergo regular external evaluations. For that purpose, FINHEEC has developed and published the "Audit manual for the quality systems of higher education institutions" which covers the period from 2011 until 2017. It is stated clearly at the beginning of the manual, that the procedures and criteria therein have been developed in line with the provisions of the European Standards and Guidelines (FINHEEC, 2011, p. 3).

According to the Finnish Polytechnics) and Universities Act, it is the obligation of each higher education institution in Finland to establish a system for internal quality assurance. Furthermore, each institution is required to undergo external quality assurance procedure. Both obligations are in line with the provisions of the ESG. The Finnish system has focused up till now mostly on the assessment of quality assurance systems of institutions, instead of for example programme evaluations. The quality label offered by FINEEC for successful participations in its institutional audit has a validity of six years from the date the evaluation council has made its official decision (FINHEEC, 2011, p.12).

While the majority of evaluations carried out by FINEEC focus on the quality assurance system of a higher education institution, one exception forms the evaluation of engineering degree programmes. The criteria and the review process for those types of evaluations are based on on the European Accredited Engineer (EUR-ACE) standard as developed and administered by the European Network for Accreditation of Engineering Education (ENAEE). The internationally recognized EUR-ACE Label has a validity of six years (FINEEC (2014b)). In contrast to the system evaluations, the participation in an evaluations process for engineering programmes is voluntary (FINHEEC, 2013). FINEEC currently is authorised by ENAAE to award the quality label for four-year bachelor programmes. A process is on-going to be granted the right to evaluate also Master programmes (FINEEC (2014b)). ENAAE grants the right to award the label to accreditation bodies which fulfil the European Framework Standards and the European Standards and Guidelines for Accreditation Agencies (FINHEEC, 2013, p.4).

Methodologies of quality assessment

Types of Assessment

The Finnish Education Evaluation Center executes three types of evaluations in the higher education sector:

1) Audits of higher education institutions' quality systems
2) Thematic evaluations of the education system
3) Evaluation of engineering programmes

The majority of evaluations carried out focus on the higher education institutions itself and their quality assurance system. In line with Finnish legislation, there are no provisions established for the accreditation of study programmes. "[T]he educational responsibilities of universities and the operating license of universities of applied sciences are decided by the Ministry of Education and Culture" (FINHEEC, 2013, p. 2). Therefore the evaluation of activities and quality assurance systems for institutions (audit) is mandatory, while the participation in thematic evaluations and assessment of engineering programs is not. Thematic evaluations have been conducted concerning various aspects of the Finnish higher education system such a "research, development and innovation activities […] and […] doctoral education" (Moitus, 2013, p. 107). Themes can be suggested directly to FINEEC.

Against this background and due to the scope of this study, the following sections will focus only on the mandatory institutional audit.

Reasons for Adopting the Current System

The system chosen in Finland aims at the continuous development of quality according to the needs and capacities of the respective higher education institution. It thereby clearly acknowledges the independence of the institutions.

Scope of Assessment and Indicators

FINEEC's key operating principles are "independence of evaluation" and "developmental/enhancement-led evaluation". "Independence of evaluation" prevents third parties, such as the Finnish Ministry of Education and Culture, from having any influence on methods, procedures or outcomes of an evaluation (FINEEC (2014a)). "Enhancement-led evaluation" has been clearly defined in the FINHEEC audit manual as aiming "to help higher education institutions identify the strengths, good practices and areas in need of development in their own operations" (FINHEEC, 2013, p. 39). It thereby "help[s] higher education institutions achieve their strategic objectives and steer future development activities in order to create a framework for institutions' continuous development" (ibid.). It focuses on "empowerment […] rather than control" (Hämäläinen, 2001, p. 23).

The targets according to which an audit procedure is conducted are defined in the FINHEEC audit manual. Six audit targets for ensuring the quality of higher education institutions have been developed, which constitute the basis for an audit conducted by FINEEC. For each of the targets a set of indicators for measuring has been defined in the manual:

Table: Audit Targets and Indicators

Audit Target	Indicators
1 Quality Policy	a. Objectives of the quality system b. Division of responsibilities c. Documentation and communicativeness
2 Strategic and operations management	a. Linkage of quality system with strategic and operations management b. Functioning of quality system at different organization levels
3 Development of the quality system	a. Procedures for developing quality system b. Development stages of quality system
4 Quality management of basic HEI duties I. Degree education II. RDI and artistic activities III. Societal impact and regional development work IV. Optional audit target (does not account for decision whether HEI passes audit) ➢ The indicators a. – e. need to be checked for each of the subcategories I-IV.	a. Objectives b. Functioning of quality management procedures c. Information produced by quality system d. Involvement of different parties in quality work e. Support services key to degree education
5 Samples of degree education	a. Planning of education b. Implementation of education c. Stakeholder involvement d. Effectiveness of quality work
6 Quality system as a whole	a. Comprehensiveness and impact of quality system b. Functioning of quality system regarding HEI's basic duties c. Quality culture as the base for development of operations

(FINHEEC, 2011, pp. 26-30)

The level of attainment of the targets is classified into four levels: "absent", "emerging", "developing" and "advanced" (FINHEEC, 2013, p. 11).

The aforementioned provides the general framework for any evaluation undertaken by FINEEC. After a higher education institutions applies for an audit conducted by FINEEC, an individual agreement or contract is negotiated between the institution an FINEEC establishing, among others, the respective targets and thresholds which the institutions has to achieve in order to pass the audit (FINHEEC, 2013, p. 9-13). As a general rule, none of the targets must be absent and target 6) needs to be characterised at least as "developing" in order for an institution to pass the audit (p. 11).

Criterion 4 provides for an optional target which the institutions can select to be evaluated against. According to Sirpa Moitus (2013, p. 101),

> "the intention is for each higher education institution to select a function central to its strategy or profile in which it would like to receive feedback by the audit team. Themes chosen by higher education institutions up to now (July 2013) have included sustainable development, the wellbeing of students, the promotion of entrepreneurship through studies and lifelong learning".

Two out of the three degree programmes to be assessed can be chosen by the institution. The audit team will select the third programme to be assessed. Thereby, the overall framework is adapted specifically to the needs of the respective institution. The system acknowledges the autonomy of the higher education institutions and adapts the audit process accordingly.

The different indicators are elaborated on more in detail in the audit manual used by FINEEC. Already during the application toward FINEEC and the following self-evaluation process, the higher education institutions are steered towards evaluating their audit targets according to the indicators established. The self-evaluation form provided by FINEEC poses very precise questions and demands relating to the respective audit targets. For instance, regarding Target 1) Objectives of the quality policy (cf. table above): "What are the key objectives of your quality system and how are they set? […] Assess the clarity of the objectives, as well as how successful and inclusive he procedure for setting them is" (FINHEEC, 2013, p. 33). Naturally, the higher education institution that is being audited needs to present evidence to the audit team during the site visit in order for them to affirm or refute the self-evaluation (ibid.). According to Hiltunen and Kajaste (n.d., p. 5), this system fosters the self-reflection of the higher education institution from a very early stage on and supports it in identifying clearly its strengths and weaknesses.

Stakeholder Involvement

According to the provisions of the FINHEEC audit manual, the team of auditors comprises normally between five and seven members plus one project manager from FINHEEC respectively FINEEC. It is assured by the manual that all relevant stakeholders are represented in the audit team: the higher educations, students and employers. They also are required to possess a certain level of experiences relating to e.g. the management of higher education institutions, the optional audit target or need to have previous experiences in audit processes. All auditors are obliged to take part in a training conducted by FINEEC in order to familiarize themselves with the procedures, objectives or the Finnish higher education system in case international auditors are chosen (FINHEEC, 2013, pp. 14-16).

The team is appointed by the Evaluation Council. In the Council the same stakeholder groups are represented: higher education institutions (both universities and universities of applied sciences), employers and students (NOQA, n.d., 2014). By the end of an audit procedure, the team of auditors makes a recommendation whether the institutions should be awarded the quality label. The final decision lies with the Evaluation Council.

Outcomes of quality assessment

Publication of outcomes

According to the Polytechnics Act (2009) and the Universities Act (2009), all higher education institutions are obliged to publish the results of the evaluations they have taken part in. There are no provisions, however, as to where and how the results have to be published. Mostly, the audit reports are accessible through the FINEEC homepage.

Possible outcomes, follow-up procedures and consequences

If a higher education institution passes the audit, it is awarded the quality label by FINEEC. Furthermore, it is listed in the FINEEC online register of audited institutions (FINHEEC, 2013, p. 12), and will receive an audit certificate stating which evaluation or accreditation institution (FINEEC or an international body) has conducted the process, which optional target was explored, and what the main outcomes of the evaluation were (FINHEEC, 2013, p. 12). Approximately three years after the audit (thus halfway before the audit has to be renewed after six years), national follow-up seminars are organised by FINEEC. Higher education institutions are invited to exchange good practices and highlight the progress of quality work since the audit. They are required to deliver a short written report for the occasion (FINHEEC, 2013, p. 20).

If a higher education institution does not pass the audit the first time, a re-audit procedure will take place along the same targets and thresholds established for the first attempt. The re-audit will take place roughly two to three years after the initial audit (FINHEEC, 2013, p. 12). If the institution passes the audit at the second attempt, they are awarded the FINEEC quality label, receive the corresponding certificate, and are listed in the online register on FINEEC's homepage. If it does not succeed during the second attempt, a decision concerning the following audit will be made individually (FINEEC, 2014, p. 24). According to Moitus (2013, p. 99), "the significance of a re-audit decision for the higher education institution in question mainly consists of damage to its reputation. It has no impact on the status or funding of the institution".

COUNTRY REPORT GERMANY

Quality assurance in Germany has the purpose of ensuring quality and compliance with State and European standards as well as improving the quality of higher education. There are several independent quality assurance agencies, which are accredited and monitored by a centralised Accreditation Council. The rules of the Accreditation Council are legally binding; they synthesise European, national and sub-national standards and comply with the ESG. The main types of quality assessment are programme accreditation and system accreditation; after successful system accreditation programmes do not need to be assessed separately. Quality is assessed against several criteria using a three-point scale: fulfilled, partially fulfilled, not fulfilled. The potential outcomes of an assessment are: accreditation, accreditation with conditions, rejection, and suspension. Bachelor and Master programmes must be accredited, while the consequences depend on the federal state law.

Higher Education System Germany

Germany is the most populous Member State of the European Union, home to 80.8 million inhabitants (Eurostat, 2014a). It has the largest student population of all Member States, hosting 2.9 million students (Eurostat, 2014b). Germany has both the highest number of outgoing and incoming students (Eurostat, 2014c). In 2014, the tertiary educational attainment rate was 33.1 percent, thereby below the EU average of 36.9 percent and the EU target of 40 percent for 2020, though – as in nearly all EU Member States – with increasing trend (Eurostat, 2014d).

Quality Evaluation and Assurance System Germany

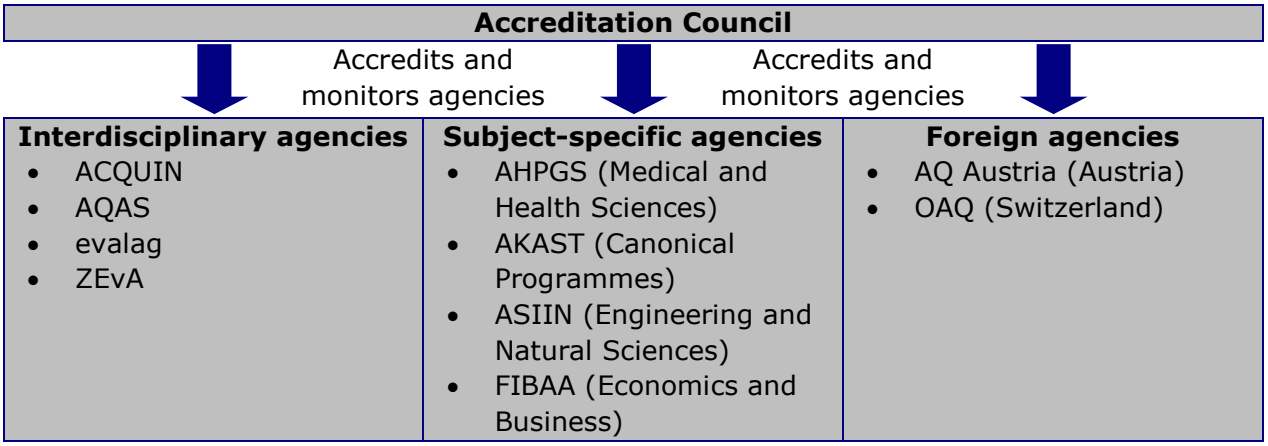
Institutional dimension

Quality assurance in Germany has the purpose of ensuring the quality of study programmes and their compliance with State and European standards (Accreditation Council, 2013, p. 2) as well as sustainably improving higher education (cf. Leetz, 2013, p. 112).

Quality Assurance Entities and Responsibilities

In Germany a centralised body – the Accreditation Council of the Foundation for the Accreditation of Study Programmes in Germany (the Accreditation Council) – is responsible for the accreditation of accreditation agencies, the formulation of binding guidelines for the agencies, the regulation of accreditation procedures and the monitoring of accreditations undertaken by the agencies (Land Parliament, 2008). The actual accreditations are conducted by independent accreditation agencies.[13] An accredited agency is eligible to operate without limitation regarding region or subject, although, in practice, some agencies only work in certain subjects. In February 2015, there are eight German accreditation agencies – four of them interdisciplinary, the other four subject-specific. Other agencies eligible to operate in Germany are AQ Austria (Austrian) and AAQ (Swiss).

[13] Accreditation of non-state-run universities is undertaken by the Science Council (Wissenschaftsrat).



Note: Information from Herrmann (2014, p. 9).

International Activities

The system is open for other foreign quality assurance agencies as long as the agencies undertake and pass the GAC review. However, the requirement of carrying out accreditation procedures in German has thus far prevented more foreign QAAs to be accredited by the Accreditation Council. All German accreditation agencies, except AKAST, are full members of the European Association for Quality Assurance in Higher Education (ENQA) and registered in the European Quality Assurance Register for Higher Education (EQAR). German accreditation agencies are members in several other international networks, such as the International Network for Quality Assurance Agencies in Higher Education (INQAAHE) and the European Consortium for Accreditation in higher education (ECA), among others, and operate in a number of foreign countries (EQAR, n.d.a).

Legal dimension[14]

Only quality assurance agencies which have been accredited by the German Accreditation Council (GAC) are eligible to perform accreditations in Germany. When accrediting the accreditation agencies, the GAC applies the "Rules of the Accreditation Council for the Accreditation of Agencies" (Accreditation Council, 2010). An accreditation of an agency by the GAC is limited to five years. The Accreditation Council monitors the work of the accreditation agencies on specific-purpose and also on a regular basis (Accreditation Council, 2014c). The former will be initiated in case of concrete indications of defects in the performance or the decision of a programme- or system accreditation procedure. The latter addresses accreditations undertaken by the agencies more in general. Regular monitoring activities comprise different methods, e.g. random sample assessments on record, attendance of procedures, consultations etc. The Accreditation Council specifies its regular monitoring activities every two years in advance taking into account the profile and market share of an agency. In their accreditations, the accreditation agencies apply the rules for the accreditation of study programmes and systems, set by the GAC. The "Rules for the Accreditation of Study Programmes and for System Accreditation" (Accreditation Council, 2013) synthesise the European Standards and Guidelines for Quality Assurance in Higher Education (ESG) as well as all legally binding rules at national and sub-national level, including the "Common structural guidelines of the Länder for the accreditation of Bachelor's and Master's study courses" (Standing Conference, 2010), the "Qualifications Framework for German Higher Education Qualifications" (HRK/Standing Conference/BMBF, 2005) and federal state law (Accreditation Council, 2011).

[14] This paragraph has been edited by a representative of the German Accreditation Council. All changes have been accepted by the research team.

Methodologies of Quality Assessment

Types of Assessment

Two main types of assessment can be distinguished in the German system:

1. Programme accreditation
2. System accreditation (Audit)

Principally, all study programmes in Germany are subject to accreditation. Therefore, programme accreditation has been the predominant type of assessment (cf. Wissenschaftsrat, 2012, pp. 137-142). This results in a large number of mandatory accreditations at programme level. In order to decrease the number of accreditations, cluster accreditation was introduced as an accreditation that accredits similar programmes within one assessment. The second form of accreditation is system accreditation (audit). An audit analyses the internal quality assurance system of a higher education institution (HEI) with regard to teaching and learning (Leetz, 2013, p. 111). If a HEI successfully passes an audit, its study programmes are no longer subject to programme accreditation. Accreditation in Germany is subject to a charge (Bartz, 2014, p. 9).

Scope of Assessment and Indicators

All agencies have to consider the rules of the Accreditation Council. In practice, each agency has its own set of rules, which complies with the GAC rules. "Regulation gaps" are often filled by the agencies with their own regulations or interpretation of regulations (Wissenschaftsrat, 2012, p. 65).

The procedure applied by the German agencies contains all "standard" elements of external quality assessments: self-evaluation, on-site visit, external report, decision and follow-up (cf. 3.1). Individual configurations of the procedure, e.g. a non-binding information meeting, occur.

Issues covered and criteria assessed

Quality assessments in Germany cover most relevant Bologna issues, including teaching, student support services, lifelong learning provision, employability and internal quality assurance/management system. The only key issue not covered is research. (EHEA, 2012c) Specific criteria for the quality assessment of study programmes relate to their design, implementation and future development (Leetz, 2013, pp. 115-116).

The following criteria are being assessed in ***programme accreditation*** (cf. Accreditation Council, 2013, pp. 11-13):

Quality criterion	Explanation
Qualification Objectives of the Study Programme Concept	This refers to technical and interdisciplinary qualification objectives, including scientific qualification, employability, involvement in society and personal development.
Conceptual Integration of the Study Programme in the System of Studies	The assessment checks whether the programme complies with the legal framework at national and sub-national level.
Study Programme Concept	The study programme concept must cover general and specific knowledge and competencies and must be designed and implemented coherently and in line with the qualification objectives.
Academic Feasibility	The external assessment covers several aspects which are supposed to ensure the feasibility of the study concept in practice (e.g. appropriate workload, support offers etc.).
Examination System Programme-related Co-operations	The examination system is suitable to assess whether the formulated qualification objectives have been met. The quality of studies must be guaranteed in case of academic co-operation with another organization.
Facilities	"The adequate implementation of the study programme is ensured with regard to the qualitative and quantitative facilities with regard to personnel, material and space." (ibid, p. 13)
Transparency and Documentation	Information on the study programme, including requirements and examination procedures must be published.
Quality Assurance and Further Development	There must be a link between the internal QA system of the HEI and the development of the study programme.
Study Programmes with a Special Profile Demand	In case of special requirements of a study programme (e.g. distance learning, part-time study programmes etc.), these have to be considered in the quality assessment.
Gender Justice and Equal Opportunities	The study programme shall consider the special needs of students in special situations (e.g. students with children, foreign students etc.).

Specifically relevant for ***system accreditation*** is an analysis of how the HEI's internal quality assurance system affects the teaching and learning quality of the institution. For this purpose, the review team conducts so-called "impact correlations" between quality of the internal QA system and the quality of the institution's study programmes (Leetz, 2013, p. 118). The criteria to be assessed include (Accreditation Council, 2013, pp. 25-27):

Quality criterion	Explanation
Qualification Objectives	An education profile for the institution and its study programmes must be published.
Internal Management in Teaching and Learning	A management system shall be in place to ensure that the HEI designs and implements study programmes based on qualification objectives and also in compliance with national and international standards.
Internal Quality Assurance	The audit checks whether the HEI has an internal QA system that complies with the ESG.
Reporting System and Data Collection	An internal reporting system must document the development and implementation of study programmes and internal quality assurance measures.
Responsibilities	The responsibilities regarding teaching/learning and internal quality assurance must be clear.
Documentation	Bodies in charge of teaching and learning must be informed at least once a year on the procedures and outcomes of internal QA measures.
Cooperation	The HEI must guarantee a high quality of its study programmes also in case of cooperation with other organisations.

Although the presentation of results is usually in the form of written text, for each criterion the review team decides whether it is 'fulfilled', 'partially fulfilled' or 'not fulfilled'. In addition to a formal assessment, the accreditation reports usually mention areas which should be improved by the HEI and which re-accreditations should consider.

Stakeholder Involvement

Stakeholders are members of the agency's accreditation commission. Specifically, academic staff is involved at all levels, including the governance structure of the Accreditation Council, the participation in the review teams, the preparation of self-evaluation reports, the decision making process and follow-up procedures. The other main stakeholders – students, employers and international peers – are members of the Accreditation Council and the review teams (EHEA, 2012c; Accreditation Council, 2014a).

With regards to system accreditation academic staff, students, graduates and practitioners from the profession participate in the development and the quality assurance of study programmes.[15]

The selection of the members of a particular review team differs from agency to agency; however, the general procedure is very similar: the agency's accreditation commission decides on the composition of the review team; thereby, the commission considers selection criteria which must be fulfilled by the team members (e.g. technical competence) and exclusion criteria which the team members must not fulfil (e.g. no former lecturer of the HEI under assessment should be part of the review team). Finally, the responsible project manager of the QA agency recruits the nominated reviewers. According to Braathen

[15] This information was provided by the German Accreditation Council.

and Zwiessler (2011), most agencies in Europe, including Germany, provide trainings for their reviewers and expect them to make use of the offers. However, the participation in such trainings is encouraged but not obligatory. In this vein, the German Council of Science and Humanities (Wissenschaftsrat) recognises potential to improve the selection of review panels and the preparation of reviewers (Wissenschaftsrat, 2012, p. 65).

Reasons for Adopting the Current System

Germany is a decentralised country where the primary responsibility for legislation and administration of higher education in Germany lies with the federal states (Länder) (Standing Conference, p. 11). The synthesis of the common and the specific structural guidelines of the Länder into a binding set of rules for the accreditation agencies and the monitoring of their implementation gave rise to the establishment of the Accreditation Council (Ibid, p. 231). The implementation of the Bologna Process required a structural reform of the higher education system. The reform of the studying structure included the adoption of the three-cycle system, modularisation, greater flexibility in student assessment, and more freedom in the configuration of study programmes with accreditation instead of compliance with framework regulations followed by governmental approval (cf. Bartz, 2014, p. 7). In this regard, accreditation can be interpreted as an attempt to ensure quality while enabling HEIs to exercise more flexibility than before the reform (cf. Ibid, p. 9). System accreditation was introduced to enhance the feedback-related aspects of quality assessments and to reduce the workload connected to programme accreditation[16] (Leetz, 2013, p. 112).

Outcomes of quality assessment

Publication of outcomes

Positive outcomes of assessments are published on the website of the Accreditation Council, whereas negative outcomes remain unpublished (EHEA, 2012c).

Possible outcomes, follow-up procedures and consequences

Potential outcomes of an assessment are: 'accreditation', 'accreditation with conditions', 'rejection' and 'suspension'. If a study programme or an institution meets all criteria, the QAA awards the quality seal of the GAC. A system accreditation gives the HEI the right of self-accreditation of its study programmes. Unconditional accreditations are valid for a period of seven years for programmes and eight years for systems (Accreditation Council, 2013). If deficiencies are likely to be resolved within nine months, the HEI receives an accreditation with conditions. In this case the HEI must demonstrate improvement within nine months. If deficiencies are likely to be resolved within 18 months, the procedure can be suspended once. Then the HEI has to eradicate the deficiencies within this time frame. If the HEI fails to meet the criteria and the accreditation commission deems the failures not fixable within nine or 18 months, the certification is denied. There is no link between funding and accreditation outcomes in Germany. However, successful accreditation is a prerequisite for admission of new study programmes and continuation of existing programmes. In some states (Länder) it is possible to obtain the quality seal after the study programme has started, whereas in other states accreditation is mandatory before programme start.

[16] Information provided by GAC.

COUNTRY REPORT NETHERLANDS

The purpose of external quality assurance in the Netherlands is ensuring the quality of higher education and contributing to its enhancement. Special to the system is that one agency is responsible for quality assurance in two countries: The Netherlands and the Flemish part of Belgium. The Dutch and Flemish quality assurance system is fully ESG compliant. The single independent national quality assurance agency is the Accreditation Organisation of the Netherlands and Flanders (NVAO), the only agency which can award legally binding accreditations. NVAO conducts accreditation with quality grading at programme level. Optionally, audit of the institutional quality assurance system is possible and a positive outcome reduces the scope of programme accreditation. The outcome of accreditation is linked to permission to award recognised degrees and funding.

Higher Education System Netherlands

The Dutch population of 16,8 million is the eighth largest in the European Union (Eurostat, 2014a). The tertiary enrolment in 2012 was at 793,700, the seventh largest in the EU (Eurostat, 2014b). The inbound mobility to the Netherlands is significantly higher than the outbound mobility from the Netherlands: 19,000 Dutch students studied in another EU, EEA or candidate country in 2012, the twelfth largest number in the EU; in the same year 44,400 international students studied in the Netherlands, the fifth most in the EU (Eurostat, 2014c). 43.1 percent of 30-34 year olds held a higher education degree in 2013, the 11th most among the EU28 Member States and more than the EU target of 40 percent for 2020 (Eurostat, 2014d).

Quality Evaluation and Assurance System Netherlands

Institutional dimension

Quality Assurance Entities and Responsibilities

Special to the Dutch system is that one agency is responsible for quality assurance in two regions, i.e. the Netherlands and the Flemish speaking part of Belgium, Flanders. The Accreditation Organisation of the Netherlands and Flanders (NVAO) is the only quality assurance agency (QAA) in the Netherlands and Flanders which awards legally binding accreditations. NVAO is a full member of ENQA (ENQA, 2012b) and listed in EQAR (EQAR, n.d.a). The agency defines the purpose of external quality assurance as follows: "The Nederlands-Vlaamse Accreditatieorganisatie (Accreditation Organisation of the Netherlands and Flanders, NVAO) independently ensures the quality of higher education in The Netherlands and Flanders by assessing and accrediting programmes, and contributes to enhancing this quality." (Van Galen, 2013, p. 137)

International Activities

Beyond its EQAR registration and ENQA membership, NVAO is member of the International Network for Quality Assurance Agencies in Higher Education (INQAAHE) and the European Consortium for Accreditation in higher education (ECA). Moreover, it cooperates with other QAAs to achieve mutual recognition of accreditation decisions. For this purpose, NVAO has bilateral and multilateral mutual recognition agreements with various agencies (cf. NVAO,

n.d.b). As a consequence, higher education institutions (HEIs) in the Netherlands are allowed to choose a foreign quality assurance agency (QAA) for external assessment if that agency uses NVAO's methodology or if the methodology has been recognised by NVAO, i.e. if the agency is member of the European Consortium for Accreditation in higher education (ECA).

Legal dimension

NVAO was established in 2005 by a treaty signed by the relevant Ministers of the Netherlands and Flanders (cf. Van Galen, 2013, p. 138). In the Netherlands, the agency's work is based on the Higher Education and Research Act (Wet op het hoger onderwijs en wetenschappelijk onderzoek, 1992); in Flanders, its tasks are defined by the Higher Education Codex (Codex Hoger Onderwijs, 2013). The laws – under consideration of the Standards and Guidelines for Quality Assurance in the European Higher Education Area (ESG) and therefore ESG compliant – have been operationalised into so-called 'assessment frameworks'. These specify all aspects relevant for the practical implementation of quality assessments (cf. NVAO, 2005, 2011a-d, 2013a-b).

Methodologies of Quality Assessment

Types of Assessment

External quality assessments are conducted at the level of study programmes in the form of accreditation with quality grading. In case a HEI successfully passes a voluntary institutional assessment, the HEI's study programmes undergo a so-called limited programme assessment, which considers only four criteria (instead of eleven). The following types of assessment can be distinguished (cf. NVAO, 2011b, p. 5):

1. Institutional quality assurance assessment
2. Limited programme assessment
3. Extensive programme assessment
4. Limited initial accreditation
5. Extensive initial accreditation
6. Assessment to determine distinctive features of programmes or institutions

Institutional quality assurance assessments (audits) analyse the internal quality assurance of a HEI. These assessments are not mandatory but conducted by NVAO upon request of a HEI. In case of a positive outcome of such an audit, accreditation at programme level considers a limited set of criteria (Limited programme assessment). Extensive programme assessment is conducted in case of a negative audit or when the HEI has not applied for institutional assessment. For new study programmes, limited initial accreditation is applied in case an institutional assessment with positive outcome has taken place, extensive initial accreditation takes place in cases where no audit has been conducted or its outcome is negative. Distinctive (quality) features are attributes of study programmes or institutions, which add to the programmes'/institutions' profile. They can be proposed by HEIs and are either included in the assessment at programme or institutional level or subject of a specific assessment. Currently (February 2015), NVAO has developed specific assessment frameworks for three distinctive features (NVAO, n.d.c): internationalisation, small-scale and intensive education, and entrepreneurship. But programmes and institutions are free to request an assessment of any feature they consider distinctive.

The assessment procedures, criteria and outcomes are specified in the corresponding assessment frameworks.

Scope of Assessment and Indicators

Key operating principles

According to its strategy, NVAO bases its work on three core values (cf. NVAO, 2013, p. 8):

- ***Independence***: Assessments are performed independent of the interests of higher education authorities, institutions and programmes.
- ***Clarity and transparency***: The agency's work is transparent and accessible for all stakeholders
- ***Respect and trust***: The agency acknowledges the primary responsibility of the HEIs for the quality of education they provide.

Procedure

The table synthesises the main steps of quality assessments in the Dutch/Flemish system.[17]

Step	Audit	Programme assessment
Consultation	✔	
Accreditation portrait	✔	
Self-report	✔	✔
Site visit	✔	✔
External report	✔	✔
Decision	✔	✔

Audits (cf. NVAO, 2011a; NVAO, 2013b; van Galen, 2013) start with a consultation process between the HEI and NVAO. The consultation focusses on the HEI's organisational structure with regard to its education. Based on the consultation NVAO draws up an 'accreditation portrait'. The accreditation portrait is sent to the audit panel and the HEI, which has the chance to respond to the portrait. The third step of an audit and the initial step of a programme assessment is the provision of written information compiled by the HEI. In audits and assessments of running programmes the HEI provides written information in form of a so-called 'critical reflection'. These self-evaluation reports provide answers to the respective quality standards (see below). For initial accreditation the HEIs submit written information in form of 'information dossiers'. 'Site visits' to validate the written information provided are conducted by external review panels. Audits comprise two visits (exploration and in-depth study), programme assessments one visit. The judgement along the quality standards and an overall judgement by the review panel are presented in a report. Based on the report, NVAO formulates its official decision.

Quality standards

All assessments are based on a few core questions, which have been translated into quality standards. Quality standards cover all relevant Bologna issues with the exception of lifelong learning provision (EHEA, 2012d).

Audits address five core questions which have been translated to five standards (cf. NVAO, 2011a, 2.2; van Galen, 2013, p. 139).

[17] 'Audit' refers to institutional quality assessments in the Netherlands and Flanders. 'Programme assessment' relates to limited programme assessment, extensive programme assessment, limited initial accreditation and extensive initial accreditation in both the Netherlands and Flanders.

Standard	Underlying core question
1. The institution has a broadly supported vision of the quality of its education and the development of a quality culture.	What is the vision of the institution with regard to the quality of the education it provides?
2. The institution pursues an adequate policy in order to realise its vision of the quality of its education. This comprises at least: policies in the field of education, staff, facilities, accessibility and feasibility for students with a functional disability, embedding of research in the education provided, as well as the interrelation between education and the (international) professional field and discipline.	How does the institution intend to realise this vision?
3. The institution has insight into the extent to which its vision of the quality of its education is realised. It gauges and evaluates the quality of its programmes on a regular basis, among students, staff, alumni and representatives of the professional field.	How does the institution gauge the extent to which the vision is realised?
4. The institution can demonstrate that it systematically improves the quality of its programmes wherever required.	How does the institution work on improvement?
5. The institution has an effective organisation and decision-making structure with regard to the quality of its programmes, which clearly defines the tasks, authorities and responsibilities and which encompasses the participation of students and staff.	Who is responsible for what?

All five standards are judged using a three-point scale: meets, does not meet or partially meets the standard. Subsequently, the audit panel makes an overall conclusion on whether an institution has control over the quality of its programmes. This overall judgement is also made on a three-point scale: positive, negative or conditionally positive. (cf. van Galen, 2013, p. 139)

For programme assessment of running programmes and initial accreditation standards regarding the following core questions have been developed (cf. NVAO, 2011b; NVAO, 2011c; NVAO, 2012; NVAO, 2013a):

	Programmes assessment				Initial accreditation			
	Limited		Extensive		Limited		Extensive	
Question	NL	FL	NL	FL	NL	FL	NL	FL
1. What is the aim of the programme?	✔	✔	✔	✔	✔	✔	✔	✔
2. How does the programme intend to achieve its aims?	✔	✔	✔	✔	✔	✔	✔	✔
Specific standards regarding curriculum, staff, services and facilities	-	-	✔	-	-	-	✔	-

	Programmes assessment				Initial accreditation			
	Limited		Extensive		Limited		Extensive	
Question	**NL**	**FL**	**NL**	**FL**	**NL**	**FL**	**NL**	**FL**
3. How does the programme evaluate to what extent the aims have been achieved?	✔	✔	✔	✔	✔	✔	✔	✔
4. How does the programme intend to safeguard quality?	-	-	✔	✔	-	-	✔	✔
Grading scale	Excellent, good, satisfactory, unsatisfactory				Satisfactory, unsatisfactory			

All assessments at programme level assess whether a programme's intended learning outcomes are in line with the required level and the subject of the programme, whether a student can achieve these learning outcomes with the teaching and learning provided, and how the achievement of learning outcomes is assessed and whether this achievement corresponds with the intended learning outcomes. Initial accreditation in the Netherlands additionally asks whether enough financial resources are available. The extensive assessment for existing programmes additionally investigates whether an internal quality assurance system is in place to ensure the programme's quality. In the Netherlands the extensive assessment of existing programmes additionally applies specific standards to assess how the aims are supposed to be achieved. These relate to the curriculum, staff, and services and facilities.

In initial accreditations the standards are judged on two-point scale: 'satisfactory' and 'unsatisfactory'. In assessments of existing programmes the assessment panel applies a four-point scale: 'Excellent', 'good', 'satisfactory' and 'unsatisfactory'.

Distinct features are assessed via specific criteria. The distinctive feature should have a distinctive but not necessarily unique character in comparison with other programmes or institution in the Dutch respectively Flemish higher education system. Additionally, it should contribute to the quality of higher education provided, that means due to the distinct feature the programme/institution should improve its grading according to the quality standards specified in the assessment frameworks (see above). To that end, the Dutch assessment framework specifies two criteria (cf. NVAO, 2011d, p. 6-7), whereas the Flemish framework specifies three criteria (cf. NVAO, 2013a, 3.2).

Area	Netherlands	Flanders
Distinction	Criterion 1: The distinctive feature distinguishes the institution or programme from other relevant institutions or programmes in the Dutch higher education sector.[18]	
Contribution to quality	Criterion 2: The impact of the distinctive feature on the quality of the education provided has been operationalised on the basis of the relevant standards in the appropriate assessment framework.	Criterion 2: The distinctive quality feature contributes to the quality of the programme. Criterion 3: The effects of the distinctive quality feature on the quality of the education provided have been operationalised.
Grading scale	Meets, does not meet or partially meets the standard	Excellent, good, satisfactory, unsatisfactory

[18] While the concrete formulation differs, the criterion is basically the same for Flanders.

While the Dutch grading applies three-point scale that is also used in the institutional audit, the Flemish grading applies the four-point scale known programme assessment (of existing programmes).

Stakeholder Involvement

Stakeholders are largely involved in external quality assessments (cf. EHEA, 2012d). Students are involved at all stages except follow-up: they are advisors to the NVAO board, full members of the external review panel, interviewed during site visits, participate in the production of the assessment report and are involved in the decision making. International experts are engaged as members of NVAO, full members of the external review teams and involved in the decision making. Academic staff and experts from the labour-market/professional field are members of the review teams and in this function participate in the decision making. Employers are involved as interview partners during site visits to verify the programmes' relevance for society.

Reasons for Adopting the Current System

In its strategy, NVAO acknowledges a 'knowledge society' and a 'knowledge-intensive economy' as the main pillars for prosperity and well-being (cf. NVAO, 2013, p. 7). This underlines the need for high quality in higher education. According to the agency's vision, a prerequisite for high-quality higher education is trust in the HEIs. In this regard, one agency has been trusted with the task of quality assurance in two countries. With its accreditations, NVAO intends to "assure the quality of higher education, encourage improvements in higher education and promote a culture of quality, and by so doing to support and strengthen trust in the higher education systems and institutions and to retain high trust or justified trust as a starting point" (Ibid, p. 7). In that sense, the application of a limited set of indicators in the 'limited initial accreditation' and 'limited programme assessment' procedures is based on trust in the respective organisations' capacities to guarantee a high quality of its programmes. Furthermore, the 'distinctive features' can be regarded as possibilities to promote the quality and specific profile of an institution. In addition, the quality grading which is being applied (see above) allows the consideration of quality enhancement aspects in addition to guaranteeing the fulfilment of minimum standards.

Outcomes of quality assessments

Publication of Outcomes

All decisions and assessment reports are published on the NVAO website (EHEA, 2012d) and available through a dedicated search engine.

Possible outcomes, follow-up procedures and consequences

Audits have three possible overall outcomes: 'Positive' judgement, 'Conditionally positive' judgement and 'Negative' judgement. A 'positive' judgement results in the applicability of the limited procedures for assessment of running programmes and initial accreditation of new programmes. This shall reduce the administrative burden for academic staff and enable them to focus on improving their teaching (cf. NVAO, 2011a, p. 4). Positive judgements are valid for six years (Ibid, p. 13). A 'conditionally positive' judgement has the consequence that the limited framework for initial accreditation/programme assessment is applied for one year. If the HEI manages to acquire a positive rating within one year, the validity of the decision will be extended to six years; if it fails to apply for additional judgement or does not manage to acquire a positive rating within one year, the conditionally positive judgement expires. In case of a 'negative' outcome the institution's programmes have to undergo the extended procedure for a minimum of three years.

Programme assessments of existing study programmes result in an overall grading of the programme on a four-point scale: 'Excellent', 'good', 'satisfactory' and 'unsatisfactory'. The final accreditation decision is made by NVAO and can take one of the following outcomes: accreditation of the programme/accreditation for a limited period of three years/granting an improvement period, no accreditation (NVAO, 2011b, p. 22; NVAO, 2013a, 2.5). In case of accreditation the programme will be registered in the relevant official register (CROHO in the Netherlands, Higher Education Register in Flanders) for six years. This means the awarded degree will be recognised by the national authorities. The positive accreditation decision also allows the programme to receive public funding (except for programmes by private HEIs) and financial student support (cf. NVAO, n.d.d). A negative accreditation decision gives rise to the programme's removal from the official register so that it can no longer award a recognised degree (Ibid).

Initial accreditation can have two outcomes: A 'satisfactory' overall assessments, which leads to a positive accreditation decision and results in the programme's recognition as a degree programme for six years, and an 'unsatisfactory' overall rating, which means the programme's degree would not be recognised and students would not be eligible for financial support. In special cases conditions are possible (cf. NVAO, 2011c, p. 11; NVAO, 2012, section 5).

Distinctive features are either awarded or not awarded (NVAO, 2011d, p. 7; NVAO, 2013a, p. 17).

Major Challenges, Recent Developments and Outlook

In its Annual Report 2013 (NVAO, 2014, p. 10) and its Strategy for 2013-2016 (NVAO, 2013c), NVAO highlights two current focal areas: In the area "assessment and assurance" the agency works on a refinement of its instruments with means to enhance transparency regarding quality and profiles. It also intends to tailor its work to the individual requirements of education providers. NVAO also strives for a reduction of the administrative burden for stakeholders involved and identified aspects which can be improved in this regard. Furthermore, the agency intends to increase the consistency of its assessments and decisions. A second focal area addresses the promotion of a quality-oriented culture.

COUNTRY REPORT POLAND

The objective of external quality assurance in Poland is the enhancement of the country's higher education quality and its international competitiveness. External quality assurance in Poland is conducted by a single independent quality assurance agency, the Polish Accreditation Committee (PKA), which is member of ENQA and registered on eqar; no foreign agencies operate in the country. Quality assessment is mainly implemented at programme level and takes the form of evaluation. The evaluation result is a quality rating on a four-point scale: outstanding/positive/conditional/negative rating. Non-negative ratings are a prerequisite for the operating of a programme, negative ratings result in suspension or abolishment. The evaluation outcomes are not linked to funding.

Higher Education System Poland

Poland has the seventh largest population in the European Union (EU): 38.5 million (Eurostat, 2014a). The tertiary enrolment is the fourth largest in the EU, at about 2 million (Eurostat, 2014b). In 2012 a total of 43,500 Poles studied in another EU, EEA or candidate country, the fourth largest number in the EU; on the other hand, Poland was at sixteenth place in the EU with 8,600 incoming students in 2012 (Eurostat, 2014c). Poland achieved the EU tertiary attainment target of 40 percent for 2020 already in 2013, when 40.5 percent of citizens aged 30-34 held a higher education degree; the national target is 45 percent (Eurostat, 2014d).[19]

Quality Evaluation and Assurance System Poland

Institutional dimension

External quality assurance aims at enhancing the quality of Polish higher education (Act of 27 July 2005 Law on Higher Education, Article 48a). It is implemented via quality evaluation of programmes and organisational units (e.g Faculty, Department) within higher education institutions.

Quality Assurance Entities and Responsibilities

Poland has a single independent national agency for quality assurance of higher education. The Polish Accreditation Committee (PKA) is responsible for all mandatory quality assessments of higher education in Poland and its decisions are legally binding. Since PKA is fully state financed, the agency does not charge fees for external quality assessments. Optionally, higher education institutions (HEIs) in Poland are able to undergo additional accreditations by subject-specific accreditation agencies, albeit without legal consequence of the outcome. (European Consortium for Accreditation, 2014b)

International Activities

Quality assessments by foreign agencies can be performed on a voluntary basis; however, the Polish Accreditation Committee is the only body which conducts mandatory evaluations and whose decisions are legally binding (EHEA, 2012e; Kwiatkowska-Sujka, 2015). PKA's assessments take into account results and certificates from international bodies (Kwiatkowska-Sujka, 2015). With status January 2015, PKA had not implemented any quality assessments in another country (Kwiatkowska-Sujka, 2015).

[19] Numbers on the size of the higher education system in Poland, as provided by PKA: 451 HEIs in total, thereof 133 public and 318 non-public.

The Polish Accreditation Committee (PKA) is a full member of the European Association for Quality Assurance in Higher Education (ENQA) and registered in the European Quality Assurance Register for Higher Education (EQAR). In addition, PKA is a member of several other international networks (Polish Accreditation Committee, n.d.): Central and Eastern European Network for Quality Assurance Agencies in Higher Education (CEENQA), European Consortium for Accreditation (ECA), International Network for Quality Assurance Agencies in Higher Education (INQAAHE). PKA has also bilateral agreements with a number of other European quality assurance agencies (Ibid), namely ANECA (Spain), ANQA (Armenia), FIBAA (Germany), NEAA (Bulgaria), NVAO (Netherlands), AQ Austria (Austria), SKVC (Lithuania) and ACSR (Slovak Republic). Furthermore, the agency signed the so-called 'Multilateral Agreement on the Mutual Recognition of Accreditation Results regarding Joint Programmes' (MULTRA) (ECA, n.d.).

Legal dimension

Quality assurance in Poland is legally substantiated by the Act of 27 July 2005 Law on Higher Education. The law forms the basis for the Statutes of PKA as well as the agency's evaluation criteria. The Statutes of PKA are published as annex to Resolution No. 1/2011 of the Polish Accreditation Committee of 10 November 2011 on the Statutes of the Polish Accreditation Committee (Resolution No. 1/2011). They define an external review of the agency "at least every five years" (p. 2). PKA's evaluation criteria form annexes to the resolution. ESG compliance of the regulations applied was confirmed in 2013 by the External review of the Polish Accreditation Committee (ENQA, 2014).

Methodologies of Quality Assessment

Types of Assessment

External quality assessment conducted by PKA comprises the following types of assessment (cf. ENQA, 2014, p. 10):

1a. Evaluation of study programmes;
1b. Evaluation of organisational units within higher education institutions;
2. Opinions to the Minister of Science and Higher Education on applications for the establishment of HEIs and branch campuses by foreign HEIs as well as for the permission to provide study programmes.[20]

Evaluations of study programmes and institutions are implemented in accordance with PKA's annual schedule (ENQA, 2014, p. 11). Programme evaluations assess the quality of first-, second- and long-cycle programmes.[21] Institutional evaluations – despite their name – do not assess HEIs as a whole but the quality of third-cycle and non-degree postgraduate programmes as well units within HEIs (e.g. Faculty, Department), which fulfil two prerequisites (cf. ibid, p. 11): Firstly, most first- and second-cycle programmes of the basic organizational unit have been evaluated; secondly, none of programmes was negatively evaluated in the past five years.

Opinions relate to new HEIs and programmes that are yet to be established; they are comparable to initial accreditation or, in broader terms, to ex-ante evaluation. After analysis of an application to establish a new institution or programme, the agency communicates to the Minister a 'positive' or a negative' opinion. While the final decision is

[20] This report focusses on evaluation.

[21] First-cycle programmes require a certificate of secondary education and lead upon successful completion to a first-cycle qualification ; second-cycle programmes require a first-cycle certificate and lead upon successful completion to a third-cycle qualification ; long-cycle programmes require a second-cycle certificate and lead upon successful completion to a second-cycle qualification (cf. Act of 27 July 2005 Law on Higher Education, Article 2, 7-9).

made by the Minister, (s)he is legally obliged to seek PKA's opinion. In practice, the Minister only deviates from the agency's opinion in few cases where the applicant provides further information after PKA's opinion (Ibid, p. 11).

PKA has eight so-called 'Sections', "working within academic areas which cover the following domains of science and fine arts: 1) Humanities and Theology, 2) Economics, 3) Social Sciences and Law, 4) Mathematics, Physical and Chemical Sciences, 5) Biological, Earth, Agricultural, Forestry and Veterinary Sciences, 6) Engineering and Technology, 7) Medical, Pharmaceutical, Health and Physical Culture Sciences, 8) Film, Music, Visual Art and Theatre Sciences." (Resolution No. 1/2011, pp. 2-3) The final decision is made by the agency's Presidium (cf. ibid, pp. 5-6).

Reasons for Adopting the Current System

Poland intends to have an internationally competitive higher education sector whose graduates fare well in the labour market (Polish Accreditation Committee, n.d.b). In this line, "HEIs shall monitor the careers of their alumni, specifically at three and five year intervals following the date of graduation HEIs are expected to keep track of their graduates." (Act of 27 July 2005 Law on Higher Education, Article 13a) This may explain the focus on quality enhancement, which is operationalised by a quality rating to allow measuring further improvement even in case of positive accreditation. Another feature of this approach is the consideration of learning outcomes and their adaption to labour market needs (Polish Accreditation Committee, n.d.c).

Scope of Assessment and Indicators

Key operating principles

PKA's mission statement defines the agency as an independent organisation working in support of quality enhancement in education (Polish Accreditation Committee, n.d.b). Quality enhancement is supposed to increase the competitiveness of Polish higher education and the labour market prospects of its graduates. The mission statement defines the instruments used to achieve the objective of education quality enhancement as mandatory programme and institutional evaluations as well as so-called opinions on HEIs' applications for authorisation to provide study programmes. Values defined in the mission statement include responsibility for decisions taken, credibility through objective assessments, professionalism, openness and transparency of procedures, precision of statements and respect for academic traditions. The agency intends to keep up dialogue with its stakeholders and international networks.

Procedure

The evaluation procedure is comparable to other accreditations and evaluations undertaken in Europe. It contains a self-evaluation report by the HEI concerned, a site visit, an external evaluation report, the HEI's feedback on the external evaluation report, a proposed quality rating by PKA's responsible Section and a decision by the agency's Presidium (Resolution No. 1/2011, p. 9).

Evaluation criteria

The evaluation criteria applied by PKA include, with the exception of lifelong learning provision, all issues addressed in the Bologna stocktaking reports: teaching, student support services, research, employability and internal quality assurance (EHEA, 2012e).[22]

[22] The Bologna Stocktaking Reports do not define 'lifelong learning' but only present this issue as an item. The person completing the questionnaire can mark the item if the external quality assessment covers this issue or not mark it otherwise. According to a PKA, assessments or organisational units witihn HEIs (institutional

In addition, the external quality assessment evaluates several other criteria; precisely, the statutes of the agency define the following criteria for programme evaluation (cf. Resolution No. 1/2011, pp. 13-14) and institutional evaluation (cf. ibid, pp. 15-17):

Quality criterion	Explanation
Study programmes	
1. The unit has formulated a concept for the development of the programme under evaluation.	• The concept is coherent with the mission statement the strategy of the unit. • Internal and external stakeholders are involved in concept definition.
2. The unit has developed and applies a coherent description of stated educational aims and expected learning outcomes for the programme under evaluation and a system for verifying their achievement.	• Expected learning outcomes are in conformity with the National Qualifications Framework (NQF) and take into consideration expectations of the labour market respectively the programme's academic area. The description of learning outcomes is published. • Learning outcomes are easily understandable and assessable. • The achievement of learning outcomes can be verified. This system is accessible to all. • The unit tracks its graduates' careers on the labour market and makes use of findings to enhance the quality teaching/learning.
3. The study programme enables the achievement of expected learning outcomes.	• The study programme enables students to achieve the educational aims and learning outcomes • Expected learning outcomes, programme contents, types of classes, and teaching and learning methods used make up a coherent whole.
4. The number and quality of staff guarantees the achievement of educational aims set for the study programme.	• The number of research and teaching staff and the structure of their qualifications enable the achievement of the educational aims. • For practically oriented programmes teaching staff has relevant practical experience. • The unit enables its staff to enhance their research and teaching competence.
5. The unit provides adequate teaching/learning and research facilities ensuring the achievement of expected learning outcomes and enabling the conduct of scientific research.	The HEI provides facilities to achieve the final learning outcomes and which take into consideration the needs of disabled people.
6. The unit conducts scientific research within the academic area(s) to which the field of study of the programme under evaluation is assigned.	Results of scientific research conducted are used in the teaching/learning process.

evaluation) also address postgraduate programmes. By defining postgraduate studies as 'lifelonglearning', one can argue that'lifelong learning' is also covered in external quality assessments in Poland.

Quality criterion	Explanation
7. The higher education institution provides students with adequate support in the learning process.	• Student admission is transparent and ensures proper applicant selection. • Student assessment is transparent and objective and oriented towards the learning process. • The structure and organisation of the programme is conducive to mobility of students. • The system for research, learning and financial support is conducive to the academic, social and professional development of students.
8. The unit develops an internal quality assurance system geared towards achieving high education quality culture within the programme under evaluation	• The unit has developed a transparent management structure and regularly evaluates learning outcomes. Evaluation results are used for quality improvement. • The process of assuring quality and developing a quality culture involves internal and external stakeholders.
Organisational units within institutions	
1. The unit has a development strategy in place.	• The strategy for the development of the unit is convergent with the mission statement and strategy of the HEI. • The unit has developed a concept of education, which is consistent with its strategic aims and objectives. • The unit defines its role and position on the education market. • Internal and external stakeholders are involved in the development of study programmes.
2. The unit applies an effective internal quality assurance system	• The structure for decision-making in quality management is transparent and ensures the involvement stakeholders. • Internal quality assurance procedures ensure that the unit may verify and assess the effectiveness of all factors which affect the quality of education. • The unit evaluates the effectiveness of its internal quality assurance system on a regular basis and uses results of such evaluations to improve its quality assurance policy and build a quality culture.
3. The unit uses a coherent description of educational aims and learning outcomes for doctoral (third-cycle) and non-degree postgraduate programmes offered, and applies an efficient and credible system to verify and confirm the achievement of the aims and outcomes.	• The unit ensures that the doctoral programmes offered lead to learning outcomes relevant to the research area concerned. • The unit ensures that the non-degree postgraduate programmes offered lead to learning outcomes which comply with the labour market. • Internal and external stakeholders are involved in the process of defining learning outcomes. • The unit applies ECTS where the number of credits corresponds to the workload of the student. • The unit has put in place a system accessible to all, which allows assessing the extent to which the stated educational aims and expected learning outcomes have been achieved.

Quality criterion	Explanation
4. The unit has sufficient staff, material and financial resources to achieve the stated strategic aims and objectives and expected learning outcomes.	• The unit provides adequate staff resources and enables its staff to develop their research and teaching competence. • The unit has adequate teaching and learning facilities. • The financial policy of the unit ensures its sustainable development.
5. The unit conducts scientific research.	The unit conducts scientific research in the areas of science related to the programmes offered, and it uses findings from its research in the teaching process. The unit enables doctoral students to participate in the research and to conduct independent scientific research.
6. The unit participates in in-country and international exchange of students, doctoral students, research and teaching staff and cooperates with national and international academic institutions, other institutions and enterprises.	• Students and staff participate in international programmes. • The unit undertakes activities aimed at the internationalisation of the teaching/learning process. • The unit cooperates with national and international academic institutions. • The unit cooperates with its social and economic environment with a view to achieving relevant learning outcomes.
7. The unit provides adequate research, learning and financial support for students and doctoral students in the process of attaining learning outcomes.	• The unit has put in place a system for research, learning and financial support which also takes into consideration the needs of disabled people. • The unit has put in place an effective system for considering complaints and conflict resolution. • The unit supports the activities of, and cooperates with, student and doctoral student self-government bodies and organisations.
8. The unit has in place a coherent system of internal regulations underpinning the quality assurance process which is in conformity with the national legislation.	-

The table shows that there is a common set of criteria to be assessed for first- and second-cycle programmes (programmes) as well as for third- and long-cycle programmes (institutions). In both cases a strategy/development concept has to be formulated in cooperation with internal and external stakeholders (Quality criterion 1 for programme and institutional evaluation). An internal quality assurance system, involving stakeholders, has to be in place for programmes (quality criterion 8) and organisational units (quality criterion 2); for organisational units the evaluation explicitly evaluates the existence of internal quality assurance regulations in line with the national legislation (8). For programme (2) and institutional evaluation (3), a coherent description of the educational aims and expected learning outcomes must be given and their achievement must be verifiable. In both cases, adequate staff must be provided (4). Adequate teaching/learning sand research facilities have to be provided for programmes (5) and organisational units (7). Furthermore, programme evaluation (5) and institutional evaluation (7) assesses whether research is conducted in fields relevant for the study programmes provided.

Other criteria are only explicitly formulated for either programme or institutional evaluation, and are only indirectly or not assessed for the other. In the case of programme evaluation criterion 3 explicitly evaluates whether first- and second-cycle study programmes are built in a way which allows students to achieve the expected learning outcomes; for institutional evaluation this criterion is covered in various other criteria. Student support is only measured in programme evaluation (7), whereas international cooperation is merely assessed in institutional evaluation (6).

Stakeholder Involvement

All stakeholders are involved in the external quality assessment, although to varying degree: Academic staff and students are involved in all stages (EHEA, 2012e). Regarding the involvement of students, the review panel of the external review of PKA in 2013 praised the agency "for ensuring active involvement of students and doctoral students in all programme and / or institutional evaluations, and for creating both conditions and a climate where they feel comfortable, their contributions are highly valued and they can develop their skills." (ENQA, 2014, p. 20) International experts are partially involved; the PKA review revealed that a stronger involvement would be welcome (Ibid, p. 22). Employers are not included in the review teams of programme evaluations but in the review teams of institutional evaluations (ENQA, 2014, p. 20). They are, as members of the Presidium, involved in the decision making process (Ibid, p. 12; EHEA, 2012e).

With the exception of international experts, "all experts receive obligatory initial as well as periodic training and meet regularly to share experience." (ENQA, 2014, p. 21)

Outcomes of quality assessments

Publication of Outcomes

All Ratings, including negative ones, and the corresponding justifications are published on the agency's website and in the Public Information Bulletin (ENQA, 2014, p. 25).

Possible outcomes, follow-up procedures and consequences

The external evaluation results in a resolution, including a quality grading under application of a four-point scale (cf. Resolution No. 1/2011, p. 18):

	Definition	
Rating	**Programmes**	**Institutions**
Outstanding rating	• Criteria 2, 3, 4 and 8 fulfilled at outstanding level; • All other criteria at least fully met.	• Criteria 1 and 2 fulfilled at outstanding level; • All other criteria at least fully met.
Positive rating	• Criteria 2, 3, 4 and 8 at least fully met; • All other criteria at least largely or partially met, no more than 25% of the total number of the criteria can be only partially met	• Criteria 1 and 2 at least fully met; • All other criteria at least largely or partially met, no more than 25% of the total number of the criteria can be only partially met
Conditional rating	• Criteria 2, 3, 4 and 8 at least largely met; • All other criteria at least partially met.	• Criteria 1 and 2 at least largely met; • All other criteria at least partially met.
Negative rating	Criteria defined for a conditional rating not met.	Criteria defined for a conditional rating not met..

The resolution contains a justification and may include recommendations (Ibid, p. 10). Follow-up and consequences depend on the grading (Ibid, pp. 10-11): Outstanding, positive and conditional ratings give permission to the programme/institution to operate. Negative evaluations result in suspension or abolishment; in case a programme shall be continued, the responsible HEI has to re-apply for authorisation to provide the programme (ENQA, 2014, p. 27). Re-evaluation is conducted after eight years in case of an outstanding rating and after six years in case of a positive rating. For conditional ratings, the Presidium identifies shortcomings to be eliminated and sets a deadline for a follow-up evaluation (Resolution No. 1/2011, pp. 10-11). The outcome of the evaluation is not linked to funding (EHEA, 2012e).

COUNTRY REPORT ROMANIA

The Romanian Agency for Quality Assurance (ARACIS) is the single independent national agency for quality assurance of Romanian higher education. For quality assessments, Romanian HEIs are allowed to choose ARACIS or any international agency registered on eqar. The legally binding method of quality assurance in the Romanian system is accreditation of institutions and their study programmes. The accreditation verifies whether minimum standards are fulfilled, which is a requirement for the operation of programmes and institutions. Elements of quality enhancement exist, such as reference standards defining the optimum level of accomplishment. Institutional accreditations are substantiated by so-called confidence grading affecting the interval of intermediary site visits. In several ways, the outcomes of quality assessments in Romania are linked to funding for programmes and institutions, although reforms in this regard are still on-going.

Higher Education System Romania

Romania is home to nearly 20 million inhabitants, the eighth most in the EU (Eurostat, 2014a). In 2014, 705,300 people in Romania were enrolled in tertiary education (Eurostat, 2014b). While the country is not among the most popular destinations for incoming students, it has the sixth largest outgoing mobility in the EU (Eurostat, 2014c). 22.8 percent of Romanians aged 30-34 had a tertiary degree in 2013, which is below the EU average of 36.9 percent and the EU target of 40 percent for 2020 (Eurostat, 2014d); however, as in most other EU Member States, Romania's higher education attainment has increased in recent years (ibid).

Quality Evaluation and Assurance System Romania

Institutional dimension

Quality assurance in Romania is institutionally attributed to the Ministry of Education (Parliament of Romania, 2011, § 192). For the performance of the assessments, Romania has a single independent quality assurance agency, named "The Romanian Agency for Quality Assurance" (ARACIS). ARACIS is full member of ENQA and listed in EQAR. For certification, Romanian higher education institutions (HEIs) are allowed to choose ARACIS or any other agency registered on eqar (EHEA, 2012f).

Legal dimension

ARACIS was established by the "Law on the approval of the Government Emergency Ordinance No. 75/2005 regarding the education quality assurance" (Parliament of Romania, 2006). The law requires ARACIS to be registered on eqar (ibid, § 23(2)). Compliance with the Standards and Guidelines for Quality Assurance in the European Higher Education Area (ESG) was confirmed in 2009 by the ENQA coordinated review of ARACIS (ENQA, 2009a), which permitted the agency full membership status in ENQA; the membership was renewed in 2013 (ENQA, 2013). The law also specifies the methodology to be applied and the criteria to be assessed. As in nearly all EU countries, HEIs in Romania are obliged to set up an internal quality assurance system (EHEA, 2012f; Parliament of Romania, 2006, Articles 11 and 12). For the purpose of external evaluation, all HEIs in the country are required to provide the Ministry of Education with relevant data (Damian & Sârbu, 2013, p. 71). The

Law of National Education adopted in 2011 (Parliament of Romania, 2011) constituted a shift of national legislation from the assurance of minimum standards towards quality enhancement and achievement of excellence (cf. ibid, § 197). The law stimulated ARACIS to further develop its assessment methodology to meet the requirements set by the law (ENQA, 2013, p. 6).

Methodologies of quality assessment

Quality assessment of higher education in Romania evaluates higher education institutions (HEIs) and their study programmes. Two stages of assessment can be distinguished: All new programmes and institutions must be authorised to operate. After permission to operate has been granted, accreditation is mandatory before degrees are being awarded. The procedure for both stages is similar and features all main elements known from accreditations in Europe: Self-evaluation, external on-site review, evaluation report with recommendation, and independent decision (Romanian Agency for Quality Assurance in Higher Education, 2006, pp. 66-69). The same criteria are assessed for authorisation and accreditation (see below). For authorisation the external assessment examines compliance with minimum standards regarding these criteria, whereas for accreditation, optionally, standards of references may be applied to measure the institution's progress towards an optimum level of accomplishment. The optimum level of accomplishment can be based on national or international good practice and has to be defined by the HEI itself. These elements of quality enhancement are supposed to be further developed eventually (cf. Damian & Sârbu, 2013, p. 82).

Issues covered and criteria assessed

The external assessment covers all relevant Bologna issues with the exception of lifelong learning provision (EHEA, 2012f). The assessment covers not only the quality of the issues but also the internal mechanisms established by the HEI to guarantee a high quality of each issue as well as the way the HEI intends to further improve its quality (Damian & Sârbu, 2013, p. 74).

Accreditations address the following quality assurance areas and criteria (cf. Romanian Agency for Quality Assurance in Higher Education, 2006, pp. 11-13 and pp. 20-43):

Area / Quality criteria	Description
Area A. Institutional capacity: Relating to the internal organisation and allocation of resources necessary for the operation of an HEI and the achievement of its objectives	
A.1 Institutional, Administrative and Managerial Structures	The HEI shall formulate a mission and objectives.
A.2 Material Resources	The HEI has its own property which supports the implementation of its mission and objectives.

Area / Quality criteria	Description
Area B. Educational effectiveness: Referring to the set-up of research, teaching and learning and the corresponding allocation of resources in order to achieve the institutions objectives in this area	
B.1 Content of Study Programmes	Addressing the student admission policy and the formulation of study programmes.
B.2 Learning Outcomes	Relating to the knowledge, skills and competencies to be acquired by the HEI's graduates "to integrate into the labour market, to develop their own business, to access to the next study cycle and to continually learn and develop" (ibid, p. 27).
B.3 Scientific Research Activities	The HEI must have a strategy and programmes for research.
B.4 Financial Management of the Organisation	The HEI shall have an adequate financial management.
Area C. Quality management: Relating to the institutions' internal quality assurance and management systems	
C.1 Quality Assurance Strategies and Procedures	Monitoring and improvement of quality is based on structures, strategies and procedures.
C.2 Procedures for the initiation, monitoring and periodic revision of the implemented programmes and activities	Rules for monitoring and periodic evaluation of each study programme exist and are applied.
C.3 Objective and Transparent Procedures for Evaluating Learning Outcomes	Rules for examination and grading as well as for the evaluation of courses exist and are applied.
C.4 Procedures for the periodic evaluation of the teaching staff	The HEI must guarantee the provision of adequate teaching staff.
C.5 Access to adequate learning resources	"The resources and services offered to students are sufficient, adequate and relevant for facilitating learning and ensuring a quality student life." (ibid, p. 39)
C.6 Regularly updated database on internal quality assurance	Data on the quality of education and student life is collected and analysed.
C.7 Transparent information of public interest with regards to study programmes, certificates, diplomas, and qualifications	The public must be informed with up-to-date and valid data on the programmes and qualifications offered.
C.8 Operational quality assurance structures, according to the Law	"Commission for Quality Evaluation and Assurance has been established, and is structured and acts according to the legislation in force." (ibid, p. 41)

Stakeholder inclusion

Academic staff is involved in nearly all levels of the external quality evaluation: Members of academic staff are part of the governance structure of the national QA agency, participate in the reviews and in the decision making process as well as in the follow-up procedures. Students are also part of the national agency's governance structure and of the review teams. In addition, they are involved in drafting the self-evaluation reports. Thus, students are involved in external quality assurance to a large degree, albeit not in the decision making process. International peers can participate in the external review teams, although this is not mandatory for accreditation (EHEA, 2012f; Damian & Sârbu, 2013, pp. 75-76).

For institutional evaluation the review team comprises at least three members, including one coordinator. The coordinator is a representative of either the Institutional Evaluation Commission for Managerial and Financial Activities or the commission's permanent specialist experts and is nominated by the mission director of ARACIS and approved by the agency's council. The coordinator ensures that all data is collected as needed for a proper assessment. The other review members are nominated from the agency's expert pool. They cover requirements at institutional level and relating to the study programmes. Additional evaluators can be added by the QA agency if deemed necessary, depending on the scale and complexity of the assessment or other relevant factors. In addition to the three members of the review team, students are nominated by a nationally recognised students' federation to participate in the review. In case of ambiguities, additional national or international experts may be nominated for an additional site visit (Damian & Sârbu, 2013, pp. 75-76). Reviewers receive training by the agency to get acquainted with the objectives and procedures of the review, with their particular role and tasks in the review as well as the methodology, criteria, standards and performance indicators to be applied (ibid, p. 76).

For the assessments of study programmes, the review team comprises maximum three members, all of them academics in the programme's field (Interview). In the case of Master domains, the team comprises at least three members, including academics, students and – if possible – a representative of the labour market.

Outcomes of quality assessment

Publication of outcomes

All evaluation results – positive and negative – are published on the ARACIS website. In addition, results are presented in the agency's annual reports and on public events (EHEA, 2012f).

Possible outcomes, follow-up procedures and consequences

Provisional authorisation and accreditation can have two outcomes: permission or denial. Authorisation permits a HEI to enrol students and to deliver courses; it is monitored via annual monitoring visits, which can result in a withdrawal of the authorisation. Two years after graduation of the first promotion, the authorised educational provider must request accreditation. Accreditation additionally licenses to organise final examinations and to deliver degrees. Thus, accreditation is a prerequisite for study programmes and institutions to operate (EHEA, 2012f).

For institutions, a grading system has been introduced, applying one of four labels to the institution: 'high degree of confidence', 'confidence', 'limited confidence' or 'lack of confidence'. For accreditations with a 'high degree of confidence' or 'confidence', intermediary on-site visits will be conducted after three years, in case of 'limited

confidence' or 'lack of confidence' after one year. In most cases, HEIs receive a 'high degree of confidence', which means there is little variation in grading (Ciolan, L., Păunescu, M. et al., 2015, p. 33). A re-accreditation of programmes and institutions is mandatory after five years (EHEA, 2012f; Damian & Sârbu, 2013, p. 72).

Accreditation is also related to funding (Damian & Sârbu, 2013, p. 72), in a sense that the QAA determines the maximum number of students, which is the basis for financial allocation for State universities (EHEA, 2012f). Other elements affecting the funding for an organisation or programme have been introduced, including classification of HEIs and ranking of study programmes (cf. Curaj, A., Deca, L. and Hâj, C.M., 2015, pp. 7-12).[23] However, due to resistance from stakeholders and a court decision, the linkage of classification and ranking had not been implemented by the end of 2013 (ibid, p. 11). Overall, although not yet fully implemented, the education law of 2011 "emphasises the importance of national competitiveness and internationalization." (ENQA, 2013, p. 5). This demonstrates Romania's intention to transform from pure compliance with minimum standards towards excellence (cf. Damian & Sârbu, 2013, p. 82).

[23] For an overview on other quality assessment instruments applied in Romanian higher education and not covered in this Study, see UEFISCDI, 2013, pp. 7-9.

COUNTRY REPORT SPAIN

The National Agency for Quality Assessment and Accreditation of Spain (ANECA) is the national agency executing quality assessment at Spanish higher education institutions. Next to the national agency, there exist ten regional agencies in the respective autonomous communities which are obligated by law to cooperate mutually with the national agency. The Spanish quality assurance system as executed by ANECA is characterised by three main strands of programmes: for programme accreditation, for academic staff assessment and for institutional assessment. Positive programme accreditation is a pre-requisite for operation, a positive assessment of one's teaching and research skills is a necessary requirement for being hired by a Spanish higher education institution.

Higher Education System Spain

The Spanish state has a total population of approximately 46.5 million inhabitants by 2014 (Eurostat, 2014a). Approximately 2 million of the inhabitants are enrolled in a tertiary education programme (Eurostat, 2014b), which are about 0.04 percent of the population. Roughly 30.000 students of Spanish nationality study in an EU country other than Spain (Eurostat, 2014c), which amounts to 0.015 percent of the student population. The tertiary educational attainment rate in Spain is relatively high at 42.3 percent in 2013. The target established by the Europe 2020 strategy of increasing the share of 30 to 34 year olds possessing a higher education degree to at least 40 percent has already been achieved (Eurostat, 2014d).

Quality Evaluation and Assurance System Spain

Institutional dimension

Quality Assurance Entities and Responsibilities

The National Agency for Quality Assessment and Accreditation of Spain or in Spanish *Agencia Nacional de Evaluación de la Calidad y Acreditación* (ANECA) is the national Spanish agency responsible for evaluation and accreditation in Spain. According to their own statement, its mission is to "promote quality assurance (QA) in the system of higher education in Spain together with its continuous improve enhancement, through guidance and orientation, evaluation, certification and accreditation, thereby contributing to the consolidation of the [EHEA] and accountability to society" (ANECA, 2015).

ANECA was founded in 2000 as a result of the introduction of the Bologna Process in the country. Due to the strong regionalisation of the Spanish state, ten of the 17 Spanish autonomous regions have established their own quality assurance agencies in addition to ANECA. ANECA acts as the only QA agency in regions which do not have a regional body. Where there exist regional institutions, national and regional laws bind ANECA and the respective institution to cooperation and mutual recognition. Their collaboration is operationalised under the Network of University Quality Assurance Agencies, REACU (EQAR, 2012, p. 8).

It is clearly stated in the introductory statement of the Organic Law on Universities (2001) that higher education institutions have to undergo external assessment and that ANECA is founded for this purpose. An amendment to the aforementioned law reaffirms the functioning of ANECA and provides for cooperation with the different regional bodies (Amendment of the Organic Law on Universities, 2007).

International Activities

In addition to the aforementioned Spanish national and regional entities, two foreign agencies registered on EQAR have also operated in Spain, which are the German accreditation agency ASIIN[24] and the European organisation ECCE.[25]

On the other hand, five of the ten existing regional agencies are both members of ENQA and listed under EQAR – next to ANECA. Those are:

1) AAC-DEVA – Andalusian Agency of Knowledge, Department of Evaluation and Accreditation, Córdoba
2) ACSUCYL – Quality Assurance Agency for the University System in Castilla y León, Valladolid
3) ACSUG – Agency for Quality Assurance in the Galician University System, Santiago de Compostela
4) AQU Catalunya - Catalan University Quality Assurance Agency, Barcelona
5) Unibasq - Agency for the Quality of the Basque University System, Vitoria-Gasteiz (ENQA, 2014; EQAR, 2014a)

ANECA has been a member of ENQA since 2003. Its membership has been reaffirmed in 2012 (ENQA, 2014). ANECA has also been listed in EQAR since 2008. The current registration is valid until 2017 (EQAR, 2014b).

Finally, when highlighting the international dimension of Spanish quality assurance, it is important to mention that ANECA is also entitled to award the EUR-ACE quality seal for European Accredited Engineer programmes as developed by ENAEE, the European Network for Accreditation of Engineering Education. Furthermore, ANECA is competent to award the EURO-INF quality seal for informatics degree programmes by EQANIE, the European Quality Assurance Network for Informatics Education (ANECA, 2015a).

Legal dimension

As has been mentioned previously, the Organic Law on Universities (2001) obligates Spanish higher education institutions to undergo external evaluation, which conforms to the ESG. It is also mentioned explicitly in the pre-text of the Law that the legislation is aligned to the provisions by the European Higher Education Area.

The Organic Law on Universities is rounded off by its Amendment of 2007 and finally the Royal Decree 1393/2007. The decree establishes in detail the obligation to have a study programme accredited ex-ante in order for it to operate. Secondly, it obligates programmes to be accredited ex-post regularly. The time frame in between the ex-ante and the ex-post accreditation is six years for Bachelor, and four years for Master and Doctoral programmes.

The respective programmes for this purpose that have been developed by ANECA, partly in cooperation with the regional agencies and RECAU will be described in more detail in the following sections. As has been highlighted previously, mechanisms for cooperation between the national and the regional agencies are laid down in the Amendment to the Organic Law on Universities. The compliance of ANECA and the aforementioned five regional agencies with the provisions of the ESG is established by the membership of the institutions in ENQA and their registration in EQAR. Naturally, both the national and regional agencies have to comply with the provisions for renewal of membership by ENQA and EQAR.

Both the EUR-ACE and the EURO-INFO quality seal have a validity of five years (ENAEE, 2015, EQANIE, 2014, p. 3).

[24] Accreditation Agency Specialised in Accrediting Degree Programmes in Engineering
[25] European Council on Chiropractic Education

Methodologies of quality assessment

Types of Assessment

ANECA carries out three types of activities, which are in line with the requirements set by the Bologna Process, according to aforementioned legal framework:

4) Programme assessment
5) Academic staff assessment
6) Institutional assessment

Each of the three areas encompasses specific programmes. In the programme assessment, there are the following three programmes:

- VERIFICA: Implements the ex-ante approval of degrees. Before admitting students into a programme, a HEI must apply to the Spanish Universities Council who in turn requests verification from ANECA (or the corresponding responsible regional authority). Accredited programmes are included in the Register of Universities, Higher Education Colleges and Degrees (RUCT) [ANECA, 2014a].
- MONITOR: MONITOR is the follow-up procedure aimed at reviewing whether an institution is implementing a study programme according to the provisions laid down in the VERIFICA procedure (ANECA, 2014a).
- ACREDITA: Implements an ex-post accreditation of a study programme according to the design presented in the original VERIFICA programme (ANECA, 2014a). After successful passing, a programme receives full accreditation.

VERIFICA, MONITOR and ACREDITA can be seen as a complete project circle. Once a study programme has been fully implemented, it is reviewed on a regular basis – Bachelor programmes every six years, Master and Ph.D. programmes every four years. If a programme is does not achieve a positive accreditation outcome, it cannot be operated by the higher education institution. While VERIFICA and MONITOR are paper-based procedures, the ACREDITA programme includes a site-visit to the institution under consideration (ANECA, 2014b).

In addition to the aforementioned programmes, there exists an additional procedure specifically designed for doctoral studies - MENCIÓN. Applicants aim at obtaining a quality label of excellence for their programmes. MENCIÓN is tendered on a yearly basis by the Spanish Ministry for Education, Culture and Sport (ENQA, 2012a, p. 12).

For the assessment of academic staff, two different programmes have been established:

- PEP: Assessment of potential teaching and research staff under PEP is a pre-requisite for both public and private HEIs before recruitment (ANECA, 2014c).
- ACADEMIA: The programme also evaluates academic staff but at the higher civil servant level, normally professors (ENQA, 2012a, p. 12).

At the institutional level, two different projects are executed:

- AUDIT: The AUDIT programme offers advice to HEIs establishing an internal quality assurance system. After the development and implementation, the internal QA system needs certification via the AUDIT programme (ANECA, 2014d).

- DOCENTIA: DOCENTIA is a teacher assessment programme. It supports universities in the development of quality assurance mechanisms for teachers and recognition of their qualifications (EQNQA, 2012, p. 13).

The above mentioned programmes are said to be executed by ANECA. The regional agencies, however, operate in principle according to the same lines of action. Next to the assessment of programmes, academic staff and institutions, some regional agencies also highlight the assessment of research. Many of the programmes have also been developed in close cooperation between ANECA and other agencies as has been argued. However, due to the limited scope of this article, it will be abstained from describing in detail the various programmes executed by regional agencies.

Reasons for Adopting the Current System

The programmes developed by ANECA and other agencies aim at regulating the higher education institutions' offer to students – the quality is controlled by the agencies.

Scope of Assessment and Indicators

ANECA highlights that its key principles for operation are "independence", "objectivity", "transparency" and the adherence to the ESG (ANECA, 2015b). ANECA, according to its self-perception, aims at a continuous enhancement of quality. The institution also perceives itself as information provider relating to the quality of the Spanish higher education sector for all stakeholders involved and the interested public (ibid.).

Here, the dimensions and indicators in each of the programmes relating to programme accreditation, academic staff assessment and institutional evaluation will be outlined, with the exception of MENCIÓN and ACREDITA PLUS since those are additional programmes following rather distinct procedures and are therefore not of main interest for the purpose of this study.

Programme Assessment - VERIFICA

The VERIFICA programme as the first step in the project cycle analyses the following dimensions, according to the assessment template provided by ANECA:

Programme	Dimensions
VERIFICA	1) Description of the degree (e.g. consistency of title and degree, clear definition of professional repercussions of the degree) 2) Justification of the degree (e.g. professional or research relevance, appropriate benchmarks directly linked to degree) 3) Competencies (e.g. clear and accurate description of skills in line with Spanish qualifications framework, measurability) 4) Entry and admission (e.g. access and admission compatible with legislation, clear admission criteria and procedures) 5) Curriculum/programme planning (e.g. curriculum and skills consistent, 60 ECTS for each academic year) 6) Academic Staff (e.g. human resources must be sufficient and appropriate) 7) Material resources and services (e.g. material resources and services must be sufficient, adequate and ensure sustainability) 8) Expected results (e.g. procedures for measuring learning outcomes, establishment of milestones for assessment) 9) Quality assurance system (e.g. internal QA system appropriate to introduction and implementation of curriculum) 10) Schedule/agenda for implementing the degree (e.g. clear timeline for implementation of degree and existing tools for inclusion of students from previously existing programmes[26]

Programme Assessment – MONITOR and ACREDITA

The follow-up procedure MONITOR covers the period from the implementation of a programme until the ex-post evaluation of the same (ANECA, 2014e, p.8). The analysis covers the main features of the dimensions of the subsequent ACREDITA_programme, however more generally than in the subsequent procedure (ibid.):

Programme	Dimensions
MONITOR & ACREDITA	1) Academic Title and Management, i.e. the organisation and development of degrees, information and transparency and the internal quality assurance system 2) Resources, i.e. academic staff as well as support staff, material resources and services 3) Results, i.e. indicators of satisfaction and achievement

Under the ACREDITA programme, the before mentioned dimensions are analysed in more detail. While the VERIFICA and MONITOR programmes are paper-based assessment, ACREDITA includes a site visit. Dimensions and indicators for accreditation have been established by REACU and described in detail in a framework document provided by ANECA; they are the same as assessed under the MONITOR programme (see above). Thereby, ACREDITA aims to prove that the execution of the degree programme is in line with the objectives set out in the preceding procedures and that the results achieved in the course of implementation and evaluation justify the accreditation (ANECA, 2014e, p. 7).

[26] The above dimensions and indicators have been developed by the Spanish Network of University Quality Agencies (REACU) in 2011 (REACU, 2011, pp. 3-9). As mentioned before, each study programme has to undergo an ex-ante assessment by one of the agencies under the umbrella of REACU.

The fulfilment of each criterion is classified into four levels: "exceeding", "sufficient", "partially sufficient" and "not sufficient" (ibid., p. 17). An accreditation will not be awarded if the academic staff, resources and student services or results are qualified as "not sufficient" (ibid.).

Academic Staff Assessment – PEP and ACADEMIA

Under the PEP programme potential academic staff in both public and private higher education institutions is evaluated before recruitment against the following criteria: a) their previous investigative /research experience (publications, participation in relevant projects, etc.), b) their teaching experience (quality and quantity of teaching, size and level of audience, etc.), c) their academic background and relevant professional experience and d) potential other merits.

For teaching assisting staff, only the first and third criteria are assessed (ANECA, 2007). As has been mentioned previously, the difference between PEP and ACADEMIA is the level and status of the staff evaluated. PEP assesses non-civil servant academic staff, ACADEMIA civil servant academic staff mostly at professorial level. The criteria for evaluation remain by and large the same as outlined above (ENQA 2012, p. 12).

Institutional Assessment – AUDIT

As has been explained previously, the AUDIT programme is twofold; it offers universities support in their efforts to establish internal quality assurance systems and, as a second step, certifies those previously implemented systems. The AUDIT programme has been jointly developed by ANECA, AQU Catalunya and ACSUG. They have developed clear guidelines as to how an effective internal quality assurance system is developed and implementation. The subsequent evaluation is done along those specific criteria:

Programme	Criteria
AUDIT	1) Clear and coherent organisation 2) Clear specification of scope 3) Contains all guidelines by ANECA, AQU Catalunya and ACSUG 4) In line with the requirements of the Royal Decree 1393/2007 5) Explicit commitment and support to the internal QA system 6) Clarification of responsibilities and processes 7) Establishment of effective follow-up mechanisms 8) Establishment of mechanisms coping with deviations 9) Definition of indicators 10) Establishment of mechanisms for continuous improvement

The level of achievement of the criteria is classified in "satisfactory", "sufficient", "insufficient" and "lack of Information" (ANECA, AQU, ACSUG, 2008).

Institutional Assessment – DOCENTIA

The DOCENTIA programme offers a framework of benchmarks, a model and procedures to evaluate a higher education institution's teaching activities as a whole. ANECA defines "teaching activity assessment" as "systematic evaluation of the performance of academic staff considering their professional roles and their contribution to achieving the objectives of the degree in which they are involved, based on the institutional context in which

degrees are imparted" (ANECA, n.d., p. 6). The three dimensions analysed within the framework of the programme are the planning of the teaching activities, the development of teaching and the results of teaching (ibid., p. 8). The evaluation is undertaken against the following four criteria: a) sustainability, b) satisfaction of all stakeholders involved in education, c) efficiency and d) guidance on teaching innovations (ibid., p. 9).

Stakeholder Involvement

ANECA is governed by a Board of Trustees. The Board is composed of several high-ranking official from the Spanish government (e.g. the General Secretary for Universities, Ministry of Education, Culture and Sport or the Secretary of State for Research, Development and Innovation), from the autonomous communities, rectors of university institutions and three students (ENQA, 2012a, pp. 9-10).

As for the compilation of review teams, for each of the different programmes executed by ANECA, assessment committees are established according to the specific programme and subject. The committees consist of representatives of higher education institutions, students and employers. The university members of the committees are appointed by their institutions, the students by the Spanish student council and the employers by the respective social council. The ANECA Board of Directors, the management body, selects the members for the committees from the nominated candidates.

The committees are responsible for carrying out the respective assessments and make recommendations as to the outcomes of the evaluations to the Board of Directors (ENQA, 2012a, pp. 10-11).

Outcomes of quality assessment

Publication of outcomes

Programme Assessment VERIFICA, MONITOR and ACREDITA

ANECA publishes those reports that have resulted in a positive evaluation outcome during the VERIFICA and progress reports of the MONITOR programme on its website. EQAR has in 2012 flagged the fact, that the report, especially for the VERIFICA programme are rather "narrow" and "formal". Often, VERIFICA reports consist only of the approval statement. EQAR has at the same time however positively highlighted ANECA's database "What to study and where?" which aims at enabling student to make an informed choice about their study programme and destination (ENQA, 2012a, p. 19). For ACCREDITA no reports are published on ANECA's webpage.

Institutional Assessment DOCENTIA and AUDIT

Within the framework of DOCENTIA, ANECA publishes the results of institutions that have participated in the programme. It is interesting to note that ANECA also makes available the results of the institutions that have undergone the procedure at one of the regional agencies (ANECA, 2014f).

Summary reports of the results from the AUDIT programme are available on ANECA's homepage. The website offers an elaborate overview of the universities and different faculties within the respective university that have participated in the programme. At the beginning of the reports, it is stated clearly whether the results were positive, positive with conditions or negative (ANECA, 2014g).

Possible outcomes, follow-up procedures and consequences

Programme Assessment VERIFICA, MONITOR and ACREDITA

The programmes VERIFICA, MONITOR and ACREDITA form a circle. MONITOR in itself is the follow-up programme for VERIFICA, in which the institutions needs to demonstrate on a yearly basis that a programme is implemented according to the set-up approved under VERIFICA and that any recommendation given by the VERIFICA assessment team are being realised. While it is good to have a predetermined follow-up through MONITOR, EQAR has criticised that the programme does not foresee a direct exchange between universities that have participated respectively are participating in the programme and an exchange of good practices in the field of quality assurance. EQAR thereby characterised the system as one of quality control rather than quality enhancement. Similar conditions apply with regard to ACREDITA (EQAR, 2012, p. 20).

Ex ante accreditation under VERIFICA is compulsory. In order for an institution to offer a study programme the assessment under VERIFICA must yield positive results (EQAR, 2012, p. 11). ACREDITA results either is a positive accreditation or in a negative accreditation decision. The ACREDITA procedure has to be undertaken in a six years turn in the case of Bachelor programmes, every four years in the case of Master and Doctoral programmes. A negative accreditation outcome will result in cancellation of a programme (ANECA, 2014b).

Institutional Assessment AUDIT and DOCENTIA

The AUDIT procedure can result in a positive or negative result or impose a conditionally positive decision. In case of a negative decision, the internal quality assurance system of the institution cannot receive the certification of the programme. It is considered not to be "suitable […] for implementation and, because of the deficiencies found, it cannot be amended in short term" (ANECA, QAU, ACSUG, 2008, p. 15). It may however, reapply at a later stage. If a positive decision is made but under conditions, the institution has to fulfil those conditions and implement the recommendation made in the evaluation report before the assessment can be considered as positive. After a positive decision, an approved system can be fully implemented (ibid.).

Major Challenges, Recent Developments and Outlook

Transparency, i.e. the publication of evaluation reports seems to be limited to a certain extent as has been highlighted by ENQA.

COUNTRY REPORT UNITED KINGDOM

Quality assurance in the United Kingdom has the purpose of accountability to students on whether a HEI meets the set quality standards as well as encouraging enhancement. Special to the system is a risk-based approach, which allows adapting the review to those areas that need the most attention. The quality assurance system of the UK is fully ESG compliant. Its single independent quality assurance agency is the Quality Assurance Agency for Higher Education (QAA). QAA applies reviews of higher education providers, which are adapted to the different nations and the concrete situations of a HEI but based on a common framework. The outcome of external quality assessment is a report, which makes graded judgements in four areas on whether the institution meets the expectations formulated in the common framework. The outcome is neither linked to the permission to operate, nor to public funding, but to the permission to use the QAA Quality Mark.

Higher Education System United Kingdom

The United Kingdom (UK) has a population of 64.3 million (Eurostat, 2014a). Around 2.5 million of its inhabitants are enrolled in higher education (Eurostat, 2014b). 17,400 of UK students study in another EU, EEA or candidate country, while more than 205,000 foreign students study in the UK (Eurostat, 2014c). The tertiary attainment rate in 2013 was at 47.6 percent (Eurostat, 2014d).

Quality Evaluation and Assurance System United Kingdom

Institutional dimension

Quality Assurance Entities and Responsibilities

The Quality Assurance Agency for Higher Education (QAA) is the single independent agency for quality assurance in the United Kingdom.[27] The main purpose of external quality assurance in the United Kingdom is twofold: Accountability to students and the interested public on whether a higher education institution (HEI) meets the set quality standards as well as encouraging improvement (cf. McLaughlin, 2013, pp. 157).

International Activities

With the exception of transnational education (TNE) provided by UK HEIs, QAA does not perform quality assessments in foreign countries (cf. EQAR, n.d.b) and HEIs in the UK cannot choose a foreign QA agency (EHEA, 2012h). QAA is a full member of the European Association for Quality Assurance in Higher Education (ENQA) (ENQA SECRETARIAT, 2013) and listed in the European Quality Assurance Register (EQAR) (EQAR, n.d.a). Thus, the agency is fully compliant with the Standards and Guidelines for Quality Assurance in the European Higher Education Area (ESG). QAA is also full member of the International Network for Quality Assurance Agencies in Higher Education (INQAAHE), member of the CHEA International Quality Group (CIQG) and an Observer of the Asia-Pacific Quality Network (APQN). In addition to its work in the UK, QAA is engaged in quality assurance of TNE and offers commercial services to international clients, such as training courses or consultancy assignments. (cf. pp. QAA, 2014, pp. 16-19; 26-27)

[27] Since the education system in Scotland differs from the education system in England, Wales and Northern Ireland, QAA Scotland has its own approach. Unless otherwise noted, this text only refers to the quality assurance system of England, Wales and Northern Ireland.

Legal dimension

QAA is a registered charity and a company limited by guarantee. Its constituent members are the higher education providers in the UK (Wissenschaftsrat, 2012, p. 109). The legal bases of QAA are the Memorandum of Association and the Articles of Association (QAA, n.d.). The 'UK Quality Code for Higher Education' (the 'Quality Code') sets out the expectations to be met by the HEIs. It is the reference point for HEIs when designing courses and for QAA when conducting external quality assessments (QAA, 2014a, p. 6). The Quality Code addresses all standards laid down in part 1 of the ESG (McLaughlin, 2013, pp. 155).

Methodologies of Quality Assessment

Types of Assessment

External quality assessment in the UK focusses on institutions (Wissenschaftsrat, 2012, p. 110). There are different types of institutions that can be distinguished as higher education providers with the authority to award recognised UK degrees ('Recognised Bodies'), including all UK universities and some higher education colleges, and colleges and other higher education providers ('Listed Bodies') whose courses must be validated by a Recognised Body in order to lead to a recognised UK degree. Reviews of higher education providers assess the procedures used by a HEI to maintain its academic standards, to provide and enhance learning opportunities, and to provide information (cf. McLaughlin, 2013, pp. 152).[28] There are different reviews of higher education providers for England and Northern Ireland (QAA, 2014c), Scotland (QAA, 2012), Wales (QAA, 2014d) and initial reviews of HEIs (QAA, 2014e). The common reference framework of all reviews is the Quality Code.

Scope of Assessment and Indicators

A characteristic of the quality assurance approach in the UK is its risks-based nature, i.e. the review can be flexibility adapted to those areas that need the most attention.

Procedure

A higher education review is implemented by reviewers, i.e. staff and students from other HEIs, and comprises two stages (cf. QAA, 2014c, Parts 3-4; McLaughlin, 2013, pp. 156-159): Desk-based analysis and review visit. Desk-based analysis compares to self-evaluation known from other quality assurance approaches. At this stage the review team analyses the report and supporting evidence compiled by the HEI. Review visits are site visits of one to five days, which are adapted to the outcome of the desk-based analysis and conclude with the publication of the external review report. Thus, the procedure applied in the UK is similar to the four steps common to most external assessment procedures (cf. Section 3.1 of this report), except that the decision (step 4 of most assessments) is not distinct from the publication of the external review report (step 3). After the report has been published, the HEI is expected to draft an action plan to respond to the findings of the report.

[28] Other assessments applied by QAA are (cf. McLaughlin, 2013, pp. 151): Educational oversight reviews for independent providers; Reviews of professional programmes; Reviews of international provision (i.e. UK awards delivered outside of the UK on an 'in country' basis).

Criteria

Reviews of higher education providers consist of a core element and a thematic element (cf. QAA, 2014c, p. 5). The core element is common to all assessments conducted and considers the Expectations stipulated in the Quality Code, whereas the thematic element changes periodically and can therefore differ between HEIs. The theme is not subject to a judgement but will be commented on in the report. In the phase 2013-2015 two themes are part of the review (cf. QAA, 2013): Student Involvement in Quality Assurance and Enhancement, and Student Employability. The HEI is expected to explore on one of the themes. The core element comprises 19 Expectations defined in the Quality Code. The Expectations focus on the institutions' internal procedures. Each Expectation is substantiated by one or more 'Indicators of sound practice', which describe ways in which the Expectations might be achieved (McLaughlin, 2013, pp. 155). A distinction is made between 'threshold academic standards' and 'academic standards': Threshold academic standards are minimum standards to be achieved by any student to receive academic credit or a qualification. For equivalent qualifications, they are agreed across the UK. "Academic standards are the standards that individual degree-awarding bodies set and maintain for the award of their academic credit or qualifications." (QAA, 2014b, p. 2) All relevant Bologna issues except research, which is only covered in the form of research degrees, are covered in the external assessment (Ehea, 2012i; QAA, 2014b, p. 7). The table summarises the main criteria which are considered in reviews of higher education providers (cf. QAA, n.d.b; QAA, 2014b):[29]

Chapter	Expectations
Part A: Setting and maintaining academic standards[30]	
A.1 UK and European reference points for academic standards	A.1 Degree-awarding bodies ensure that the requirements of the applicable national qualifications framework are met
A.2 Degree-awarding bodies' reference points for academic standards	A.2.1 Regulations on the award of credits and qualifications are transparent and comprehensive A.2.2 A definitive record of each programme is the reference point for assessment, monitoring and study records
A.3 Securing academic standards and an outcomes-based approach to academic awards	A.3.1 Processes for the approval of programmes and research degrees ensure that the UK threshold standard for the qualification is met. A.3.2 The achievement of learning outcomes and the UK threshold standards are prerequisites for credit award A.3.3 Monitoring and review processes ensure that UK threshold academic standards are met A.3.4 Degree-awarding bodies use external expertise to ensure that academic standards are maintained

[29] In Wales the review additionally addresses arrangements for postgraduate research students and internationalisation (McLaughlin, 2013, p. 156).

[30] Threshold academic standards are the minimum acceptable level of achievement that a student has to demonstrate to be eligible for the award of academic credit or a qualification. For equivalent qualifications, the threshold level of achievement is agreed across the UK.

Chapter	Expectations
Part B: Assuring and enhancing academic quality	
B.1 Programme design, development and approval	B.1 HEIs operate effective processes for the design, development and approval of programmes
B.2 Recruitment, selection and admission to higher education	B.2 Recruitment, selection, and admission policies and procedures adhere to the principles of fair admission
B.3 Learning and teaching	B.3 HEIs articulate and systematically review and enhance the provision of learning opportunities and teaching practices to facilitate independent learning
B.4 Enabling student development and achievement	B.4 HEIs have in place, monitor and evaluate arrangements and resources which enable students to develop their potential
B.5 Student engagement	B.5 Students are involved as partners in the assurance and enhancement of their educational experience
B.6 Assessment of students and the recognition of prior learning	B.6 Equitable, valid and reliable processes for assessment and recognition are in place
B.7 External examining	B.7 Higher education providers make scrupulous use of external examiners
B.8 Programme monitoring and review	B.8 HEIs operate effective, regular and systematic processes for monitoring and for review of programmes.
B.9 Academic appeals and student complaints	B.9 Procedures for handling academic appeals and student complaints are fair, accessible and timely, and enable enhancement
B.10 Managing higher education provision with others	B.10 Arrangements for delivering learning opportunities with organisations other than the degree-awarding body are implemented securely and managed effectively.
B.11 Research degrees	B.11 Research degrees are awarded in a research environment that provides secure academic standards for doing research and learning about research approaches, methods, procedures and protocols.
C: Information about higher education provision	
-	C Higher education providers produce information for their intended audiences about the learning opportunities they offer that is fit for purpose, accessible and trustworthy.

For each Expectation the review report makes a statement whether it has been 'met' or 'not met'. In addition, the risk to the management of the respective area is assessed as either 'low', 'moderate' or 'serious'. This allows specifying the focus of the action plan.

Stakeholder Involvement

Reviews are conducted by students and academic staff from other HEIs (McLaughlin, 2013, pp. 156-159). QAA has piloted the inclusion of international peers in the review team (Ibid, p. 158). There is no requirement to include employers in the review process, the involvement of different stakeholders depends on the specific situation of the HEI (EHEA, 2012h). All selected reviewers must attend a training, which simulates an actual review (McLaughlin, 2013, p. 158).

Reasons for Adopting the Current System

The UK system recognises the autonomy and diversity of its higher education institutions but still applies a common framework to assess its quality. In that sense, the common framework ensures that comparable judgements can be made regarding the extent to which expectations have been met, while allowing institutions to pursue different ways of meeting the expectations. When allowing divers paths to achieving quality, the object of the assessment is necessarily the institutions' internal quality assurance system and the extent to which it contributes to the individual approach. (cf. AQ Austria, 2014, pp. 28-29) This diversity and the purpose of accountability towards students demonstrate a market-oriented approach, where education can be seen as a product and students can be seen as clients, whose interests are "at the heart of the review method" (McLaughlin, 2013, p. 157). In this vein, the country made efforts to increase the expenditure for higher education that will be recouped from graduates, while in turn improving the students' experience (cf. BIS, 2011, pp. 4-6).

Outcomes of quality assessments

Possible outcomes

Based on the assessment of the 19 or all applicable Expectations (see above), the review team makes four judgements relating to four areas: Setting and maintaining academic standards (Quality Code, Part A), assuring and enhancing academic quality (Part B), information about higher education provision (Part C), Enhancement (embedded in Part B). For each area the review team formulates a judgement, using the following wording (QAA, 2014c, p. 33):

"1 **For degree-awarding bodies**: The setting and maintenance of the academic standards of awards...
For non degree-awarding bodies: The maintenance of the academic standards of awards offered on behalf of degree-awarding bodies and/or other awarding organisations...
2 The quality of student learning opportunities...
3 The quality of the information about learning opportunities...
4 The enhancement of student learning opportunities..."

The judgement on academic standards (1) is made on a three-point scale: meets UK expectations, requires improvement to meet UK expectations or does not meet UK expectations. The judgement on learning opportunities (2), information (3) and enhancement (4) uses a four-point scale: is commended, meets UK expectations, requires improvement to meet UK expectations and does not meet UK expectations. The following table summarises the judgements and their rationale (cf. Ibid, pp. 34-36).

Judgement	Explanation
…is or are commended	All applicable Expectations have been met.
…meet(s) UK expectations	All, or nearly all, applicable Expectations have been met. Expectations not met do not, individually or collectively, present any serious risks to the management of this area.
…require(s) improvement to meet UK expectations	Most applicable Expectations have been met. Expectations not met do not present any serious risks. Some moderate risks may exist which, without action, could lead to serious problems over time with the management of this area.
…do(es) not meet UK expectations	Several applicable Expectations have not been met or there are major gaps in one or more of the applicable Expectations. Expectations not met present serious risk(s), individually or collectively, to the management of this area, and limited controls are in place to mitigate the risk. Consequences of inaction in some areas may be severe.

Publication of outcomes and follow-up procedures

All judgements and the corresponding reports are published on the QAA website (EHEA, 2012h). The follow-up procedure includes an action plan to be drafted by the HEI in response to the findings of the assessment. The action plan and a link to the external assessment report must be published on the HEI's website. It must be updated annually until actions have been completed. (cf. QAA, 2014c, p. 23)

Consequences

If no area 'requires improvement' or 'does not meet UK expectations', the HEI is eligible to use the QAA Quality Mark. If at least one area 'requires improvement to meet UK expectations' or 'does not meet UK expectations', the HEI is not allowed to use the QAA Quality Mark. In these cases the action plan will be more detailed and must explain how to overcome the weaknesses or risks. Where respective improvements are acknowledged by the review team, a judgement can be changed, e.g. from ''requires improvement to meet UK expectations' to 'meets UK expectations'. (cf. QAA, 2014c, pp. 22-26) The different outcomes have no consequence on the permission of a HEI to operate and are not linked to public funding (EHEA, 2012h). Only HEIs which do not subscribe to QAA and do not participate in its reviews will neither receive public funding nor degree awarding powers (cf. QA Austria 2014, p. 17). The assessment outcome does have a consequence on the timing of the next review: HEIs with a strong record in managing quality undergo an assessment every six years, whereas HEIs without a strong record are reviewed every four years (McLaughlin, 2013, pp. 157).[31]

[31] A 'strong record' refers to at least two successful reviews and the last review being successful, i.e. judgements of 'is commended' or 'meets UK expectations' in all areas, latest after the required follow-up activity (cf. QAA, 2014c, p. 9).

Major Challenges, Recent Developments and Outlook

With means to increase the competition between HEIs, the UK government suggested to reduce the regulatory barriers for other higher education providers to enter the market (BIS, 2011, Chapter 6). This has increased the number of HEIs eligible for reviews by QAA "and one of the major challenges for QAA is levelling this 'higher education playing field' while allowing new providers to enter the academic community in a gradual manner" (McLaughlin, 2013, p. 161). A recent development has been the introduction of a risk-based approach to quality assurance, which allows greater flexibility in the review process (e.g. duration and focus of site visit) and the assessment cycle (Ibid, 2013, p. 162). An outlook is the development of a single quality assurance framework for all higher education provision in Northern Ireland by 2016 (Ibid, 2013, p. 162). Themes chosen for the thematic element of the review in the period 2015-2016 are Student Employability and Digital Literacy (QAA, 2014f).

COUNTRY REPORT BRAZIL

Various institutions under the Brazilian Ministry of Education and Culture (MEC) manage quality assessments in the higher education sector. The National Higher Education Assessment System (SINAES) established in the year 2004 evaluates undergraduate programmes, institutions and the performance of students. CAPES, another institution belonging to the MEC, is responsible for the authorization and evaluation of all graduate programmes. All evaluations apply a simplified scoring system whereat minimum scores are required for both, the authorization and continuation of study programmes and institutions. That way the increasing higher education sector is regulated through the evaluation system in place. Due to its regulatory function, the quality assessment system may be classified as a hybrid of evaluation and accreditation. Another interesting aspect of the system in place is that funds provided for scholarships at graduate level are linked to evaluation results. All evaluation results are made available to public. Scores are regularly further processed and used for rankings.

Higher Education System Brazil

Brazil, a federal constitutional republic based on representative democracy, is the largest country in South America and has a population of about 200 million inhabitants. The Ministry of Education and Culture (MEC) is responsible for providing technical and financial support to the States, the Municipalities and the Federal District for their education systems; it is responsible for drafting all legislation related to the education sector, supporting the network of federal education institutions and supervising the private education sector (Stanek, 2013, p.2). The MEC embraces seven principal secretariats one of which is the Secretariat of Higher Education.

Brazil's higher education institutions (HEI) can be generally classified in universities, university centers and colleges. According to Brazil's last higher education census, which took place in 2013, there is total of 2.391 HEIs, most of which are private (87.5%), followed by state (4.6%), federal (4.3%) and municipal (3.6%) institutions. While the private higher education sector is mainly composed of smaller institutions offering bachelor programmes only, federal universities also offer master studies, PhD programmes and research facilities. Due to this the average enrollment rate at federal universities is about four times higher than at private HEIs.

University education in Brazil is generally divided into two levels: firstly, the undergraduate level (*graduação*) which lasts normally 4-5 years and concludes with a bachelor (*bacharel*) or a teaching diploma (*licenciado*). Secondly, the graduate level (*pos-graduação*) including master studies and PhD programmes concluding two years later with the *mestrado professional/acadêmico* and about another four years later with the *doutorado*, respectively. In terms of students, the Brazilian higher education sector has currently about seven million undergraduate enrolments of which about one million conclude their studies annually. Though the number of graduate programmes has been rising rapidly and nearly doubled since 2004, the number of graduate students with 220.000 is still relatively small compared to the undergraduate enrolments amounting to about 7 million (Müller, 2014).

Quality Evaluation and Assurance System Brazil

Institutional Dimension

The history of higher education assessments in Brazil started in 1993 with the Institutional Assessment Programme of Brazilian Universities (PAIUB) elaborated by the National Association of Presidents of Federal Higher Education Institutions on request of the Ministry of Education (Hoffmann, 2014, p.654). In the following years, quality in higher education became more and more prominent on the agenda, especially with the creation of the *Sistema Nacional de Avaliação da Educação Superior*, the National Higher Education Assessment System (SINAES) in the year 2004. SINEAS established a global and integrative assessment system for all public and private Brazilian higher education institutions (Hoffmann, 2014, pp.651). This complex system is based on self-assessment, external assessment, teaching conditions, and information tools such as the higher education census and a registration completed by HEIs (ibid.).

The National Higher Education Evaluation Committee, or the *Comissão Nacional de Avaliação da Educação Superior* (CONAES), is responsible for the supervision and coordination of all activities performed by SINAES. CONAES inter alia establishes guidelines for the organisation and designation of evaluation committees, reviews reports, makes recommendations, formulates proposals for the development of higher education institutions and submits annual reports on courses in which students took the National Examination of Student Performance, or *Exame Nacional de Desempenho dos Estudantes* (ENADE).[32] The National Institute of Educational Studies and Research, or *Instituto Nacional de Estudos e Pesquisas Educacionais* (INEP), is responsible for the operationalization of all kind of evaluations with the exception of graduate programmes.

The Ministry of Education's graduate education department CAPES (*Coordenação de Aperfeiçoamento de Pessoal de Nível Superior*) is in charge of evaluating graduate programmes as well as promoting international scientific cooperation through scholarship schemes. Furthermore, CAPES is responsible for the authorization and accreditation (*autorização e reconhecimento*) of new graduate programmes, both at masters and PhD level (Müller, 2014). The system applied by CAPES further outlined below has a long and successful history in Brazilian higher education, dating back to the mid-1970s (OECD, 2013, p.59).

Legal Dimension

The federal law No. 10.861 established SINAES and its test component, ENADE, in April 2004, under the auspices of the Ministry of Education. At this time, legislation also created the National Higher Education Evaluation Committee (CONAES) to oversee all SINAES activities, and all decisions regarding changes to the system (OECD, 2013, p. 58). These laws were established as a state policy regardless of the election of new authorities or the administrative sphere.

The creation of SINAES was closely associated with the main aspects of the former PAIUB system, especially as regards the experience gained in the field of institutional assessment.

[32] CONAES is composed of thirteen members, including representatives from INEP, CAPES, MEC and various higher education organisations, including federal, state (provincial) and private institutions, and other members with recognized scientific knowledge and well-known competence in higher education evaluation or management.

SINAES adopted many of the principles and guidelines of PAIUB such as the organic integration of self-assessments with external assessments, active participation of the academic community, respect for institutional identity and acknowledgment of the diversity of the system. Unlike PAIUB, however, SINAES did not adopt the principle of voluntary membership but required that all Brazilian HEIs, not only the federal ones, must participate in the assessment processes (Hoffmann, 2014, p. 655).

With reference to legal issues it may be noted that there was a controversy around the creation of two key evaluation indices. The Preliminary Course Programme Score (CPC) evaluating undergraduate courses was eventually regulated by a normative rule in August 2008. The General Course Index (IGC), assessing the performance of the institution as a whole, has been governed by a normative rule since September 2008 (ibid., p. 657).

Methodologies of Quality Assessment

Types of Assessment

From its inception, SINAES has been based on three integrated main components or sub-systems: a) programme evaluations, b) institutional evaluations and c) performance assessment of undergraduate students. The first two components are monitored by local assessment processes whereas the latter is supported by the National Student Performance Exam (ENADE). This analysis concentrates on the programme and institutional evaluation for the sake of comparisons with other countries considered in the study. Since ENADE results feed the programme and institutional evaluations, these are also displayed in the overview table of assessment indicators further below.

Programme Evaluations

Programme evaluations at the undergraduate level are organized by INEP, while CAPES covers all graduate programmes. It may be noted that there are some differences as to the procedures and instruments used by these institutions though the general line of evaluations are almost the same. In this context there a two different stages of programme evaluations which apply for both, undergraduate and graduate programmes:

Authorization of new study programmes ("*autorização e reconhecimento"*)

Once a year recognized HEI can require the authorization of new study programmes (*entrada*). Therefore, they need to apply with the Ministry of Education. Then a committee composed of two evaluators, registered in the expert database for such purposes (*Banco Nacional de Avaliadores*, BASis), pays a visit to the institution concerned. Here, they assess three key dimensions, namely the didactical and pedagogical set-up (curricula, programme objectives, etc.), the profile of teaching and administrative staff and the infrastructure provided to students. If teaching conditions are considered appropriate (minimum score of "3", see below), study programmes are preliminary authorized to operate (*autorização)*.

As soon as the first intake of students enters the second half of their study programme, another assessment and two day site-visit is conducted by the evaluators. In case of positive assessment results, the programme receives full accreditation (*reconhecimento*) superseding the preliminary authorization (INEP, 2014). Official admission is eventually provided by a so-called technical scientific council for higher education (*Conselho Técnico Científico da Educação Superior*) based on the assessment results of the experts committee.

Periodic evaluations ("renovação de reconhecimento")

Every three years all study programmes are evaluated by INEP and CAPES (*permanência*). For all undergraduate programmes the Preliminary Course Programme Score (*Conceito Preliminar do Curso* – CPC) is calculated. CPC results are expressed in a five-point scale, with level 5 being the highest and level 3 indicating the minimum acceptable level.

CAPES evaluates all graduate programmes and engages around 600 evaluators in the technical committees of 48 disciplines. These technical committees analyze data and information from higher education institutions that CAPES staff had collected and consolidated before. For graduate courses, results are expressed in a scoring system on a seven-point scale with 3 being the minimum required for operation. Only PhD programmes can be given scores higher than 5 if they are rated "very good" (grade 6) or "excellent" (grade 7) in international comparison (Müller, 2014).

Institutional Evaluations

When it comes to institutional evaluations in the Brazilian higher education sector, research literature often refers to the General Course Index (*Índice Geral de Cursos* - IGC). The IGC combines the Preliminary Course Programme Scores (CPC) of undergraduate courses and the scores assigned by CAPES to graduate courses at a given institution. IGC results ranging from 1 to 5 are published annually by INEP and the Ministry of Education and are often considered as a comprehensive indicator for institutional performance. In fact, the IGC often serves as orientation for students and a guiding reference for external institutional assessment committees (Hoffmann, 2014, p.658).

The proper concept of institutional evaluations focusing on the internal quality assurance system of universities, their policies and processes, financial sustainability and alike has undergone several changes and adjustments during the last years. Generally speaking, institutional evaluations are based on internal and external assessments as well as data and information from the education census and other statistical sources of the higher education institutions. All external institutional evaluations are organized by INEP assessing the following ten dimensions (*Ministério de Educação do Brasil*, 2010, pp.5):

- Mission and institutional development plan
- Teaching and research policies
- Corporate social responsibility
- Communication with the society
- Human resource policies
- Administration and institutional organisation
- Physical infrastructure
- Processes and efficiency of institutional self-evaluation
- Policies for student support services
- Financial sustainability

All dimensions are analyzed and judged with a score from 1 to 5, again with 5 being the highest and 3 the required minimum standard. In case results are unsatisfactory, there shall be a commitment protocol to be signed between the higher education institution and the Ministry of Education, establishing deadlines and goals to carry out actions in order to overcome the difficulties detected (Lucia Diaz, 2006).

Overview of Evaluation Indicators

As evidenced by the former analysis, all quality assessments in the Brazilian higher education sector follow similar scoring systems. The table overleaf gives an overview of the most common quality indicators and their inputs for computing.

Quality Assessment Brazilian Higher Education Sector: Evaluation Indicators

Abbr.	***Indicator***	***Scoring Range***	***Type / Objective of Evaluation***	***Inputs / Dimensions Assessed***
ENADE	*Exame Nacional de Desempenho de Estudantes* National Student Performance Exam	1 – 5	Students Performance	• Test results of selected students of the first and the last year (undergraduates)
CPC	*Conceito Preliminar do Curso* Preliminary Course Programme Score	1 – 5	Programme Evaluation Undergraduate Courses	• ENADE score for graduating students • Quality of teaching staff • Infrastructure (facilities, library, etc.) • Other programme and institutional data
CAPES	*Resultados da Avaliação da Pós-Graduação*	1 – 7 (grades 6 and 7 for PhD only)	Programme Evaluation Graduate Courses (MA/PhD)	• Academic profile • Structure of curricula • Teaching and research staff • Quality of programme degrees and performance of students • Teaching, learning and research facilities • Social insertion of programme
IGC	*Índice Geral de Cursos* *General Course Index*	1 – 5	"Institutional Evaluation" Average of all course levels at a given Institution	• CPC values • Converted CAPES values
---	*Avaliação Institucional* *Institutional Evaluation*	1 – 5	Institutional Evaluation Internal Quality Systems, Policies, Processes, etc.	• Self-Evaluation • External Evaluation (dimension see above)

The above table underlines once more that the different quality indicators are interdependent and feed into each other. Final quality results are measured in quantitative terms and do not make use of detailed qualitative appreciations. According to Hoffmann, the quality measurement indices used by INEP are not widely accepted by the academic community that is dedicated to studies on higher education (Hoffmann, 2013, p. 653). He further outlines that the application of quantitative indicators leads back to the time of rankings, market assessments and media simplifications producing visibility rather than true quality assessment (ibid., p.657).

The Organisation for Economic Cooperation and Development (OECD) observes that – although the MEC issued a few technical reports explaining the methodology employed by SINAES - so far, no comprehensive validity analysis of the uses of the system's results has been developed. Moreover, OECD argues that the system may require modifications before it may be considered valid for its purpose of accreditation and regulation, at least at the undergraduate level. Of particular importance seems to be the fact that the scoring methodology is uniformly applied to all areas and types of programmes, and to all types of institutions, disregarding specific mission-related academic characteristics, like an emphasis on research or on teaching (OECD, 2013, p.64).

Outcomes and Rationale of Quality Assessment

According to INEP, the overall objectives of evaluations performed are the identification of merits in the areas of teaching, learning and research, the improvement of the quality provided in the higher education sector and the promotion of social responsibility of the institutions respecting their identity and autonomy. CAPES points out that another objective is to detect regional asymmetries in the quality of postgraduate programmes provided (*Fundação Capes*, 2014).

The motivation behind the evaluation system in place may also be founded by the number of private higher education institutions which increased drastically during the last years. The particularities of the evaluation system allow the government to impose restrictions and even close poor performing programmes and institutions. Thus, evaluations are much more than an appraisal without consequences. They have a regulatory function since a certain quantitative result (minimum score or grade of "3") is needed for the authorization and continuation of study programmes and institutions. Given that the quality assessment system in place may be classified as a hybrid of evaluation and accreditation or, in other words, an evaluation system comprising elements of accreditation and approval.

The aforementioned regulatory aspect may be substantiated by the fact that every year a few institutions are placed on probation in case programmes performed poorly in the last two assessment cycles. As a consequence, the Ministry of Education and Culture imposes cuts in enrolment vacancies, as for example around 500 vacancies in medical school programmes in the year 2011, following the 2010 round of SINAES. In law programmes no less than 34.000 vacancies have been closed since the year 2007. Many programmes lost accreditation, sometimes even entire institutions were shut down and its students transferred to neighboring colleges. Typically, institutions suffering vacancies cuts or shut down of programmes are for-profit private colleges and universities (OECD 2013, pp. 61).

It may be noted that for graduate programmes benefits for good performers exist. CAPES as responsible institution for such programmes provides a flexible amount for scholarship programmes depending on the individual evaluation results achieved. Thus, programme evaluations at the graduate level are combined with an incentive system.

All evaluation results produced by INEP and CAPES in charge of the Ministry of Education are made available to the public in line with transparency goals for quality assessments. This, however, facilitates the development of league tables and rankings of institutions and programmes by public media. Though rankings are not bad as such, there are often problems involved through manipulating or eliding information for specific purposes or due to lack of understanding. This way evaluations and thereof resulting rankings are often used for advertisement purposes rather than for quality enhancement and process evaluation as intended by the original SINAES proposal (INEP, 2009). In some cases institutions distorted and publicized data in such a way, that the Ministry of Education had to intervene and ask institutions to remove their advertisements (OECD, 2013, p. 63).

COUNTRY REPORT JAPAN

Quality assessments in the Japanese higher education sector were chiefly under ministerial control before the Certified Evaluation and Accreditation System (CEA) was established in 2004. Nowadays the Ministry of Education, Culture, Sport, Science and Technology (MEXT) only keeps direct control over the ex-ante authorization of new universities. Apart from that MEXT certifies quality assurance agencies undertaking ex-post institutional assessments independently taking into consideration rules of the CEA. Quality assessments, obligatory for all higher education institutions, combine evaluations striving for quality enhancement through recommendations and advice, and accreditations verifying the compliance with minimum standards needed for further operation. In case of non-compliance with standards MEXT calls gradually for corrective actions which may lead to the shut-down of an institution. The currently 86 national universities are evaluated separately by the main quality assurance agency (NIAD-UE). This is done under a special regime (NUCE) that assesses the universities' performance determining their future budget.

Higher Education System Japan

According to information provided by the World Bank in 2013, Japan has a population of about 127 million. At present there are more than 3 million students enrolled at about 1.200 Japanese higher education institutions (HEIs).[33] The higher education system is currently composed of 782 universities of which 624 are graduate schools for obtaining masters degrees, a PhD or a professional degree. In addition, there are 359 junior colleges and 57 colleges of technology where associate degrees are awarded (NIAD-UE, 2014, p.8). Undergraduate programs at universities normally take four years, with the exception of medical science which last six years on average. Master studies take two years and PhD studies three to four years, respectively. About 250 HEIs are public institutions, while about 950 are private (Finken, 2014).

Private institutions generally cover all areas of study, though they traditionally focus on humanities, social sciences, business administration/economics and law because the government has insufficient resources to match the increasing demand in these disciplines. Private institutions do not receive public subsidies, thus making tuition fees the main source of income.[34] Due to that it is not surprising that some private universities are facing financial difficulties, often resulting in poorer teaching quality compared to public higher education institutions. This is also reflected in the number of academic staff: 60.000 teachers are engaged in public and 92.000 teachers in private universities despite the fact that about three quarters of all students are enrolled in private institutions (Maruyama, n.d., p. 2). Universities became officially autonomous with the establishment of the Certified Evaluation and Accreditation System (CEA) in 2004. This deregulation constituted a major milestone in changing the governance structure of the higher education sector traditionally steered by the government (Newby, 2009, p.89).

[33] Figures excluding the more than 2.800 professional training colleges where about 600.000 students are enrolled.

[34] The tuition fee at public unversities is around EUR 3.000 per year, significantly lower than at private universities where students are requierd to pay EUR 6.000 per year (Maruyama, n.d, p. 5).

Quality Evaluation and Assurance System Japan

Legal Dimension

Accreditation and evaluation have a long tradition in Japan. The Japanese University Accreditation Association (JUAA), a non-governmental organization, was founded for the accreditation of the new post war universities in 1947. In the year 1956 the Japanese government created the "Standards for the Establishment of Universities" (SEU). Further major changes in university evaluation took quite some time until self-evaluations of universities were introduced in 1991. Since 1998 HEIs have been obliged to publish their self-evaluation reports while at the same time external evaluations through independent organizations commenced (Finken, 2014).

In 2000 the National Institution for Academic Degrees was reorganized to the National Institution for Academic Degrees and University Evaluation (NIAD-UE), which is currently the main responsible evaluation body. In 2003 standards for the establishment of professional graduate schools were defined. The already mentioned Certified Evaluation and Accreditation System (CEA) was introduced one year later based on the revised School Education Law (NIAD-UE, 2014, p.16). Since then all higher education institutions are legally obliged to undergo external assessments. The National University Corporation Evaluation (NUCE) assessing separately the performance of the 86 national universities is based on the corresponding law from the year 2008.

Institutional Dimension

The most important players in the field of evaluation are the Japanese Ministry of Education, Culture, Sport, Science and Technology (MEXT), the Advisory Council for University Establishment, technical (sub-) committees of the Ministry, external quality assurance agencies and the universities themselves.

MEXT certifies and provides licenses to all quality assurance agencies engaged in the CEA system. Agencies assessing universities, junior colleges and colleges of technologies (institutional CEA) are registered separately from the ones assessing professional graduate schools (professional school CEA). In this context it may be noted that there is officially no programme evaluation in Japan. Although the professional school CEA focuses on certain disciplines or subject areas, the units or institutions are evaluated as a whole.

Four organizations are currently certified for the institutional CEA which each higher education institution needs to undergo at least every seven years.

Certified QA Organizations in Japan (Institutional CEA)

Evaluation Agency	*Type of HEI*	*Further Specifications*
National Institution for Academic Degree and University Evaluation (NIAD-UE)	• Universities • Junior Colleges • Colleges of Technology • Professional Schools	Mainly national / public and local institutions
Japan University Accreditation Association (JUAA)	• Universities • Junior Colleges • Professional Schools	Mainly private and local institutions
Japan Institution for Higher Education Evaluation (JIHEE)	• Universities • Junior Colleges	
Japan Association for College Accreditation (JACA)	• Junior Colleges	

NIAD-UE is the only institution certified to undertake evaluations of all types of HEIs, including professional schools. NIAD-UE concentrates its actions on public universities and supports NUCE, the National University Corporation Evaluations (see below), while JUAA assesses mostly private institutions. The other two organisations are significantly smaller and focus on certain types of institutions.

In total there are currently twelve certified quality assurance agencies responsible for external evaluations at professional graduate schools that must be conducted at least every five years. Each of these agencies covers one or a few related subject areas.

Certified QA Organizations in Japan (CEA Professional Schools)

Evaluation Agency	Subject Area
National Institution for Academic Degree and University Evaluation (NIAD-UE)	*Law Schools*
Japan University Accreditation Association (JUAA)	*Law, Intellectual property, Public Health, Public Policy, Management*
Japan Institution for Higher Education Evaluation (JIHEE)	*Fashion Business*
ABEST21	*Management, Intellectual Property*
Foundation of the Japanese Certification Board for Clinical Psychologists	*Clinical Psychology*
Institution for Beauty Business Evaluation	*Beauty Business*
Japan Accreditation Board for Engineering Education	*IT, Innovation for Design and Engineering, Embedded Technology, Nuclear Engineering*
Japan Institute of International Accounting Education	*Accounting*
Japanese Institute of Landscape Architecture	*Landscape Architecture*
Japan Institute of Midwifery Evaluation	*Midwifery*
Japan Law Foundation	*Law Schools*
The Institute for the Evaluation of Teacher Education	*Teacher Education*

Source: NIAD-UE, 2014.

In case an evaluation agency for a specific area of study does not exist, professional schools are required to be assessed by foreign agencies designated by the Minister as internationally recognized organization (NIAD-UE, 2014, p.25). All other evaluation need be conducted by the certified Japanese quality assurance agencies.

Methodologies and Types of External Quality Assessment

There are three principal external quality assessment mechanisms in the Japanese higher education sector: a) the ex-ante authorization for new universities in place since the creation of JUAA in the year 1947, b) the certified ex-post evaluation and accreditation under the CEA system in place since 2004, and, c) the evaluation of national universities under the NUCE regime established in the year 2008.

Ex-ante Authorization of New Universities

Every new university needs to be approved and authorized ex-ante by MEXT. The purpose of this approval system is to assure the quality of HEIs and the provision of academic compatible degrees. Government approval is required for the establishment of graduate schools (academic units) and universities (faculty, department) as well as junior colleges and colleges of technology (both at department level). Applications are submitted by the higher education institutions directly to the Ministry. MEXT's Advisory Council for University Establishment and specific sub-committees composed of academics and university experts examine the application in light of the Standards for the Establishment of Universities (SEU). These standards are used to verify, inter alia, the educational and research structure, qualification of academic staff, curricula, facilities, equipment and administrative organization (NIAD-UE, 2014, pp. 19).

Of particular importance as regards the ex-ante authorizations is the sustainable provision of study courses. Therefore, institutions are closely monitored through reports, interviews and site-visits of peers until the first intake of students are to graduate. All applications and examination results are made available to the public through MEXT's official website (ibid.).

Ex-post Evaluation and Accreditation (CEA)

Ex-post evaluations and accreditations apply the rules of the Certified Evaluation and Accreditation System (CEA). Assessments are executed by the quality assurance agencies displayed in the institutional dimension chapter above. All agencies have their own standards, rules and procedures. Higher education institutions are legally obliged to undergo regular external assessments but are free to choose the agency.

The Certified Evaluation and Accreditation System (CEA) has two main lines of action with different objectives and consequences:

Accreditation: Similar as for the ex-ante authorisation, the compliance of minimum quality standards is checked. The certified quality assurance agencies assess chiefly the institutions management system, teaching and research activities. This is done by a peer review based on the universities' self-examination and evaluation. In case of compliance, HEIs receive a certified accreditation seal for the next five or seven years. If an institution for any reason fails to comply with laws and regulations such as the Standards for the Establishment of Universities (SEU), so-called corrective actions may be required by the Ministry. The traditional single action of issuing an order to close an entire institution was recently replaced by three gradual measures: a) recommendations for improvement, b) an order to change, and, c) an order to close a department or the entire institution (NIAD-UE, 2014, p.21). All information on corrective actions is made available on MEXT's website.

Evaluation: The objective of this action line is the enhancement of quality, particularly as regards teaching and research. The evaluation identifies good practices and gives advice as to how improve in the future. Corresponding findings will be embedded in the accreditation report published on the Ministry's website.

The following analysis outlines the operating principles, standards and the typical project cycle of the biggest quality assurance agency, the National Institution for Academic Degree and University Evaluation (NIAD-UE).

The operating principles of the institutional CEA applied by NIAD-UE are (Finken, 2014):

- Evaluation based on standards (for details see below)
- Focus on teaching and educational activities
- Contribution to the development of the individual identity

- Evaluation and accreditation on basis of self-assessment reports
- Peer review principle
- Transparency
- International recognized evaluations and accreditations

As mentioned above the first operating principle of institutional evaluations for universities is that it is based on standards. For the ongoing evaluation cycle lasting from the year 2012 until 2018, the following standards are applied and verified:

- Mission of the university
- Structure for teaching and research
- Academic and administrative staff
- Admission rules and procedures
- Study programs
- Learning outcomes
- Facilities and student support
- Internal quality assurance system for teaching and research
- Financial conditions and management
- Information about teaching and learning made available to the public

Each of the above standards is reviewed towards reference points defined by NIAD-UE. In comparison with the former evaluation cycle the following three standards have been newly included: learning outcomes, internal quality assurance system for teaching and research and information about teaching and learning made available to the public.

The institutional evaluations at universities undertaken by NIAD-UE always follow a standardised project cycle. This begins with the elaboration of a self-evaluation report by the universities, followed by a document analysis and site visit by experts of NIAD-UE. Thereafter universities receive a draft evaluation report on which they can possibly comment and object. Eventually, the final accreditation and evaluation report will be published and the accreditation seal provided (ibid.).

Apart from the compulsory evaluation along the aforementioned standards and procedures, universities can additionally opt for up to three so-called institutional thematic assessments (ITA):

- Option A: Research Activities
- Option B: Community Engagement
- Option C: Internationalization

Costs for the institutional evaluations at universities (CEA) and the institutional thematic assessments (ITA) vary from about EUR 6.500 (ITA) to EUR 26.000 (CEA) per request. Additional fees of EUR 4.500 (CEA) and EUR 2.600 (ITA field of research) apply for the assessment of certain programs/disciplines.

Evaluation of National Universities (NUCE)

The assessment of the 86 national universities, or the National University Corporation Evaluation (NUCE), is under direct responsibility of the evaluation committee of the Ministry of Education, Culture, Sport, Science and Technology (MEXT). In contrast to the CEA, that periodically reviews all higher education institutions, NUCE applies a performance based evaluation. All national corporations and inter-university research institute corporations are

assessed with regard to the achievement of mid-term objectives and plans (Kawaguchi, n.d., p.13). Specifically, NUCE analyses target achievements in three fields, namely teaching, research and institutional management. The evaluation in the first two fields (teaching and research) has been delegated to the agency NIAD-UE, while reviews in the field of institutional management are undertaken by MEXT directly. The results of the NUCE evaluation determine the next six years plan and the specific budget amount provided by MEXT to the national universities.

NUCE results are discriminated in a grading system: excellent, good, satisfactory, unsatisfactory and improvements necessary. During the last completed evaluation round (2006-2011), 12.8 percent of the national universities were rated as good and 87.2 percent as satisfactory in the field of teaching. In research, 3.5 percent of the universities were given an excellent grading, while 41.9 percent were assess as good and 55.8 percent as satisfactory (NIAD-UE 2014). All costs arising from NUCE are covered by MEXT.

Outcomes and Rationale of Quality Assessment

Quality assurance is considered by the Japanese government as an important tool for promoting effective learning, ensuring the required skills and competencies of graduates as well as for providing useful information to incoming students and graduates' employers.

The rationale behind quality assessments follows various objectives. First of all, the compliance with minimum standards verified before the authorization of new universities, faculties and departments as well during their operation; the latter checked compulsorily through accreditations under the CEA regime. Secondly, assessments strive for quality enhancement reached through ex-post evaluations, likewise implemented being part of the CEA. Ex-post evaluations identify good practices and provide advice for future improvements. Thirdly, the performance and achievement of mid-term goals of national university corporations are measured through assessment conducted under NUCE.

The outcomes and consequences of the quality assessments are various. While the CEA evaluations focus on quality enhancement, the ex-ante authorization and ex-post CEA accreditations are a condition for a university or department to operate. If higher education institutions do not operate in line with laws or comply with minimum standards they either do not receive authorization to start operations or are required to undertake corrective actions. The corrective actions are gradually called for by the Japanese Ministry, starting with recommendations for improvement, followed by orders to change, finally ending up with the closure of a department or the entire institution. Another consequence for the 86 national universities is that their budget is partly determined by the performance achieved under the NUCE regime.

Results of all evaluation are made available through the website of the Ministry of Education, Culture, Sport, Science and Technology (MEXT), though complying with transparency requirements of external quality assurance.

COUNTRY REPORT USA

Quality assurance in the United States is executed at the institutional as well as at the program level. Both are conducted on an ex-ante basis regulating the offer of more than 4.500 higher education institutions. Accreditation of institutions is voluntary. However, a positive accreditation statement is linked to benefits such as government funding, easy credit transfer and a good reputation which eventually will attract more students. Thus, it can be argued that market mechanisms regulate higher education institutions and their quality. The main players in the field of quality assurance are the U.S. Education Department, the independent Council for Higher Education Accreditation and about 60 accreditation agencies.

Higher Education System USA

The United States of America is a constitution-based federal republic with approximately 318 million inhabitants (CIA, 2014). Due to the federal nature, the tertiary education sector in the USA is traditionally organized decentrally and is highly differentiated. Education is not described as a federal task in the Constitution of the United States. Therefore, governance of higher education varies greatly with each of the 50 federal states. The degree of control over higher education institutions by the state differs. Some institutions are fully autonomous while in others, governing boards may be appointed by the responsible state governor (Eckel and King, n.d., p. 5).

According to the latest "Digest of Education Statistics" offered by the National Center for Education Statistics (NCES, 2012a), there are more than 4.500 public and private so-called "degree-granting institutions", i.e. public and private universities as well as liberal arts and community colleges. About 21 million students have been enrolled in 2014 in all those mentioned institutions, according to estimations by NCES. Approximately 70 percent of those attend a public institution, the remaining 30 percent a private one (NCES, 2012b).

Education at colleges and universities is divided into undergraduate studies leading to a Bachelor's degree in Liberal Arts or Sciences after four years of education. Upon successful completion of the Bachelor's degree, a student can begin his or her graduate education leading to a Master's degree, followed by the Doctoral degree. A Master's program usually requires between one and two years of study. After the Master's degree, a Doctoral degree can be acquired usually within two to four years. Many higher education institutions however do not necessarily require a Master's degree before admitting students into a Doctoral program. In those cases, the Doctoral degree is usually awarded after three to four years of study (Fulbright Commission, 2015).

Financing of higher education institutions originates to a certain extent from the government but also directly from the students through tuition fees. Typically for the U.S., it is believed that market mechanisms and the choices of students improve quality and efficiency of higher education (Eckel and King, n.d., p. 5). Average annual tuition fees vary between approximately 3000 USD for two-year public colleges and 29000 USD for private four-year colleges (College Board, 2015).

Quality Evaluation and Assurance System USA

Institutional Dimension

Due to the high level of decentralization in the US American higher education system, as mentioned above, there existed a tendency towards intransparency in terms of quality of HEIs and their programmes in the past. Therefore, already towards the end of the 19th century mechanisms for quality assurance were developed and six so-called "Regional

Accrediting Organizations" founded for the purpose of conducting institutional accreditation. The associations cover the different geographical areas as follows:

1) New England Accrediting Organization (founded in 1885)
2) Middle States Accrediting Organization (founded in 1887)
3) North-Central Accrediting Organization (founded in 1895)
4) Southern States Accrediting Organization (founded in 1895)
5) Northwest Accrediting Organization (founded in 1917)
6) Western College Association (founded in 1924)

If a higher education institution wants to apply for accreditation, it has to be with the respective organization that is regionally responsible. Therefore, the agencies are not competing against each other (Wissenschaftsrat, 2012, pp. 112-114).

In addition, "Programmatic Accrediting Organizations" for programme accreditation were founded by the science community and the labor market in the 20th century to secure field specific and professional minimum requirements of a study programme. The Programmatic Accrediting Organizations are clustered according to fields of study or profession. An example of a programmatic institution is the Accreditation Board for Engineering and Technology, ABET Inc. There exist approximately 50 field-specific agencies which do not only review the technical standards of a study programme but also health and safety-relevant criteria relevant for the licensing of a profession (ibid., pp. 112-114).

Finally, there exist nationally operating accreditation agencies for private vocational education institutions and faith-related institutions (ibid., p. 115). These fall, however, not into the main scope of this study and will therefore not be illuminated in more detail.

In 1996, the "Council for Higher Education Accreditation (CHEA)", which is a private, government-independent organization, was founded as an umbrella organization. Members of the CHEA are the tertiary education institutions awarding scientific degrees, research universities and about 60 accreditation agencies (national, regional and programmatic agencies). It is the duty of the CHEA to accredit the accreditation agencies and to review their standards for accreditation of the higher education institutions (ibid., p. 115).

Legal Dimension

Despite the decentral organization of higher education in the U.S., the federal government has been involved in issues of quality assurance since the adoption of the Higher Education Act in 1965. Government funding for higher education institutions is directly linked to the accreditation by an institutions that is officially recognized by the U.S. State Department of Education (USDE). The review is conducted by the National Advisory Committee on Institutional Quality and Integrity, NACIQI (Wissenschaftsrat, 2012, p. 113).

While USDE does not engage in accreditation activities itself, it is by law obligated to publish a list of accreditation agencies it formally recognizes. The "Database of Accredited Postsecondary Institutions and Programs" comprises all information that is transferred from the accreditation agencies to the Department of Education relating to all institutions and programs assessed (USDE, 2015a). The criteria for recognition are publicly available on the homepage of the Department. Agencies must, for example, apply set standards for reaching an accreditation decision or provide information on a regular basis to the USDE (USDE, 2015b). Review by NACIQI normally takes place every five years. It includes communication with the agency, a self-report by the agency under consideration and

occasionally a site-visit. After the process, NACIQUI makes a recommendation as to the recognition towards USDE (Eaton, 2012a, p. 7).

It is not in the competences of the U.S. Department of Education to recognize foreign accreditation agencies, nor to recognize the activities of foreign accreditation agencies within the United States (USDE, 2015a; USDE, 2015b).

The differences between the CHEA and USDE accreditation can be summarized as follows: USDE is government-supervised while CHEA is an independent institution. "Accreditors seek CHEA or USDE recognition for different reasons" as Eaton (2012a, p. 8) puts it. "CHEA recognition confers an academic legitimacy on accrediting organizations helping to solidify the place of organizations and their institutions and programs in the national higher education community. USDE recognition is required for accreditors whose institutions or programs seek eligibility for federal student aid funds" (ibid.).

Methodologies of Quality Assessment

Types of Assessment

As has been mentioned previously, the quality of higher education in the United States is assessed both on the institutional as well as on the programme level. The procedures and standards for both will be described in the upcoming sections. Summarising however, one can say that both in the institutional as well as in the programme accreditation, there exists an ex-ante control mechanism which aims at proving whether the higher education institution complies with the mission it has set for itself, or for an individual study programme (Wissenschaftsrat, 2012, p. 114).

Institutional Accreditation

In the context of institutional accreditation, it has been outlined before that by USDE accreditation, an institution aims at becoming eligible for government funding while CHEA accreditation confers academic legitimacy. Taking into account the overall focus of this study, the following refers only to accreditation by the CHEA.

As a first step for an accreditation agency to be permitted to conduct institutional accreditation at a higher education institution, it has to be accredited by the CHEA. CHEA reviews an agency's standards as to whether they are apt for:

- Ensuring the progress of scientific quality of a HEI
- Provide accountability relating to its structures, processes and achievements
- Foster its change and development
- Contribute to its fair and transparent decision-making
- Ensure continuous evaluation and improvement of its own accreditation practices.

Within the aforementioned five dimensions, the accreditation agencies are quite flexible in the elaboration and definition of the precise procedures for accreditation of the HEIs (Wissenschaftsrat, 2012, p. 115).

Even though the agencies are flexible in the definition of accreditation procedures, there seems to be a consensus that the assessment of an institution is undertaken against the following eleven areas:

1) Mission and purposes
2) Planning and evaluation
3) Organization and governance
4) The academic Program

5) Faculty
6) Students
7) Library and other information resources
8) Physical and technological resources
9) Financial resources
10) Public disclosure
11) Integrity (Securius-Carr, 2014).

The procedure itself is very similar to the one applied widely in Europe. It includes a self-evaluation report, followed by an on-site visit conducted by a peer group. The self-evaluation period has a duration of twelve to 18 months. The final accreditation decision is made by the agency commission. The period of validity of the accreditation varies between two and ten years. Halfway between two accreditations, an interim report has to be drafted by the higher education institution (ibid.).

Program Accreditation

The field of program accreditation in the United States is equally diversified. Approximately 60 agencies and associations (both scientific as well as professional) exercise program accreditation in their respective fields. All of them have developed individual processes, standards and criteria – even though, according to CHEA, all address "expected student achievement, curriculum, faculty, services and academic support for students and financial capacity" in one way or another (CHEA, 2015).

Due to the diversification of the system, it would be beyond the scope of the study to illuminate all of program accreditation agencies and their functioning. Instead, the Accreditation Board for Engineering and Technology, ABET Inc., has been chosen as an example.

ABET's criteria for accreditation can be divided into two overarching sets: the general criteria and the program criteria. Naturally, the first (general criteria) are more universal in nature and cover the following areas:

- Students (i.e. student performance, provisions for transfer, etc.)
- Program educational objectives (i.e. published objectives in line with mission, etc.)
- Student outcomes (definition of learning outcomes by the time of graduation)
- Continuous improvement (evaluation of learning outcomes)
- Curriculum (consistency with learning outcomes to be achieved, etc.)
- Faculty (experience and education background of staff, appropriate number)
- Facilities (modern tools and guidance as to usage)
- Institutional support (institutional services, financial support, etc.)

The program criteria are, of course, designed in line with the respective program and cover the areas of student outcomes, curriculum and faculty. As an example, the program criteria for "Information Systems and Similarly Named Computing Programs" are listed hereunder:

Student Outcomes: "The program must enable students to attain, by the time of graduation: An understanding of and an ability to support the use, delivery, and management of information systems within an Information Systems environment".

Curriculum: "Students must have course work or an equivalent educational experience that includes […]

1. coverage of the fundamentals of a application development, data management, networking and data communications, security of information systems, systems analysis and design and the role of Information Systems in organizations. [IS]
2. advanced course work that builds on the fundamental course work to provide depth […]

Faculty: Some full-time faculty members, including those responsible for the IS curriculum development, must hold a terminal degree with a program of study in information systems (ABET, 2015a).

Depending on the field of study, the program specific criteria do not necessarily have to cover all three before mentioned areas; a combination of two out of three is possible as is the examination of only the curriculum (ibid.). [35]

The accreditation procedure conducted by ABET comprises as a first step the drafting of a "Readiness Review" report in order to verify that it is ready for submission of the official "Request for Evaluation". In case of acceptance of the first two steps, the higher education institution under consideration is requested to submit a self-evaluation report, which is followed by an on-site visit by three evaluators. The peers who have participated in the visit transfer their findings to the relevant commission at ABET. The commission has the final decision-making power (ABET, 2015b).

If a program is accredited by ABET, the accreditation has a validity of six years and needs to be reviewed afterwards. If a program shows one or more weaknesses an interim report needs to be submitted by the HEI and an interim visit has to take place after two years. If after that, ABET finds that weaknesses have been overcome (revision by report and so-site visit), an accreditation is granted for two or four years (ABET, 2015c).

Outcomes and Rationale of Quality Assessment

Participation in accreditation of institutions and programs is on a voluntary basis. However, Judith Eaton, President of CHEA highlights the following purposes of U.S. accreditation which have been partly elaborated on before:

First, of course, accreditation serves the purpose of assuring the quality of higher education. A positive accreditation outcomes signals a certain threshold of quality of an institution's faculty, curriculum, human and material resources.

Second, the access to federal and state funds is secured through accreditation by an agency that is recognised by the U.S. Department of Education. Funding in this context relates mostly to student aid which the institution can only receive, and in turn distribute, in case of positive accreditation.

Third, both a positive programme accreditation in specialised fields of study but also the more overarching institutional accreditation fosters the confidence of the labor market in the graduates of a certain study programme. It will also have an impact on an employer's decision whether to support additional education of his employees at a certain institution.

Finally, accreditation facilitates the transfer of students and credits between programmes and institutions. When the decision is made whether to recognise previously earned credits, an institution will check carefully whether those credits have been earned at an accredited institution and within an accredited programme (Eaton, 2012b, pp. 18-19).

It has been criticised in the past that the U.S. American accreditation system is focused too strongly on inputs instead of outputs. It has been demanded to review more strongly students' learning outcomes (Wissenschaftsrat, 2012, p. 116). Therefore, agencies intend to comply with this requirement and adapt their accreditation procedures accordingly. For example, as has been outlined above, ABET has included aspects relating to learning outcomes in their recent revisions of accreditation criteria (for details, see p. 4-5).

[35] The areas of assessment vary slightly for engineering programs. Here, applicability and objectives of a program as well as the learning outcomes are included.

Other criticism relates to the fact that accreditation does not respond to the challenge of rising costs or new technologies such as for distance learning. Peter Conn (2014) from the University of Pennsylvania adds one important aspect relating to religious institutions to this list of critical aspects. By awarding accreditation to religious colleges, the basic principles of higher education – "[S]keptical and unfettered inquiry" – are undermined. Such inquiry cannot take place in institutions that are teaching according to a certain religious doctrine. Nor can professors foster their students' critical assessment of different issues if they are required by an institution to submit a faith statement as prerequisite for being hired. As Conn phrases it, "accreditation to [religious] colleges… makes a mockery of whatever academic and intellectual standards the process of accreditation is supposed to uphold". In comparison to Europe, this issue may in the U.S. be a particularly important one since there are geographical regions such as the "bible belt" in which religious beliefs are very strong and often conflict with scientific evidence. However, when illuminating accreditation in the United States, it cannot be neglected

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Overview of External Quality Assurance System of the European Union (EU 28)[36]

Dimension / Country	Institutional, legal and international dimension			Methodologies of Assessment		B.4 Outcomes		
	Type of QA Agency	ESG Compliance	Openness to Foreign QAAs[37]	Main Object of Evaluation	Issues Covered[38]	Publication of Outcomes	Main Outcome[39]	Impact on Funding
Austria	Several independent QA agencies	Certified	Some HEIs can choose a foreign QA agency	Institutions & Programmes	67%	Positive and negative outcomes published	No data available	No
Belgium French	Single independent national QA agency	Certified	No HEI can choose a foreign QA agency	Programme	100%	Only positive outcomes published	Formative advice on QA improvement	No
Belgium Flemish	Single independent national QA agency	Certified	All HEIs can choose a foreign agency	Institutions & Programmes	67%	Positive and negative outcomes published	Permission/prerequisite for continuation/operation	Yes
Bulgaria	Single independent national QA agency	Certified	No HEI can choose a foreign QA agency	Institutions & Programmes	83%	Only positive outcomes published	Permission/prerequisite for continuation/operation	No
Croatia	Single independent national QA agency	Certified	All HEIs can choose a foreign agency	Institutions & Programmes	83%	Positive and negative outcomes published	Permission/prerequisite for continuation/operation	Yes
Cyprus	Several independent QA agencies	Not certified	Some HEIs can choose a foreign QA agency	Institutions & Programmes	50%	Only positive outcomes published	No data available	No

[36] Status: 2012. Data taken from national Bologna Stocktaking Reports 2012.
[37] Refers to the openness to foreign QAs for conducting the legally binding QA procedure in the country.
[38] See national Bologna stocktaking reports 2012, Part 1.3, Question 1.9.
[39] Permission to operate may also refer to permission to offer degree programmes which are recognized by the national authorities.

Dimension / Country	Institutional, legal and international dimension			Methodologies of Assessment		B.4 Outcomes		
	Type of QA Agency	ESG Compliance	Openness to Foreign QAAs	Main Object of Evaluation	Issues Covered	Publication of Outcomes	Main Outcome	Impact on Funding
Czech Republic	Single independent national QA agency	Certified	No HEI can choose a foreign QA agency	Programme	67%	Positive and negative outcomes published	Permission/prerequisite for continuation/operation	Yes
Denmark	Several independent QA agencies	Certified	Some HEIs can choose a foreign QA agency	Programme	100%	Positive and negative outcomes published	No data available	Yes
Estonia	Single independent national QA agency	Not certified	All HEIs can choose a foreign agency	Institutions & Programmes	100%	Positive and negative outcomes published	Permission/prerequisite for continuation/operation	Yes
Finland	Single independent national QA agency	Certified	All HEIs can choose a foreign agency	Institution	83%	Positive and negative outcomes published	Formative advice on QA improvement	No
France	Several independent QA agencies	Certified	No HEI can choose a foreign QA agency	Institutions & Programmes	100%	Positive and negative outcomes published	No data available	Yes
Germany	Several independent QA agencies	Certified	Some HEIs can choose a foreign QA agency	Institutions & Programmes	83%	Only positive outcomes published	No data available	No
Greece	Single independent national QA agency	Not certified	No HEI can choose a foreign QA agency	Programme	100%	Positive and negative outcomes published	Formative advice on QA improvement	No

Dimension / Country	Institutional, legal and international dimension			Methodologies of Assessment		B.4 Outcomes		
	Type of QA Agency	ESG Compliance	Openness to Foreign QAAs	Main Object of Evaluation	Issues Covered	Publication of Outcomes	Main Outcome	Impact on Funding
Hungary	Single independent national QA agency	Certified	No HEI can choose a foreign QA agency	Institutions & Programmes	67%	Positive and negative outcomes published	Permission/prerequisite for continuation/operation	No
Ireland	Several independent QA agencies	Certified	No HEI can choose a foreign QA agency	Institution	100%	Positive and negative outcomes published	No data available	No
Italy	Single independent national QA agency	Certified	No HEI can choose a foreign QA agency	Institutions & Programmes	100%	Positive and negative outcomes published	Permission/prerequisite for continuation/operation	No
Latvia	Single independent national QA agency	Certified	No HEI can choose a foreign QA agency	Institutions & Programmes	100%	Positive and negative outcomes published	Permission/prerequisite for continuation/operation	Yes
Lithuania	Single independent national QA agency	Not certified	All HEIs can choose a foreign agency	Institutions & Programmes	100%	Positive and negative outcomes published	Permission/prerequisite for continuation/operation	Yes
Luxembourg	Several independent QA agencies	Not certified	No HEI can choose a foreign QA agency	Institutions & Programmes	83%	Positive and negative outcomes published	Formative advice on QA improvement	Yes
Malta	No national agency	No data available	No HEI can choose a foreign QA agency	No data available	0%	No data available	No data available	No data available

Dimension / Country	Institutional, legal and international dimension			Methodologies of Assessment		B.4 Outcomes		
	Type of QA Agency	ESG Compliance	Openness to Foreign QAAs	Main Object of Evaluation	Issues Covered	Publication of Outcomes	Main Outcome	Impact on Funding
Netherland	Single independent national QA agency	Certified	All HEIs can choose a foreign agency	Institutions & Programmes	83%	Positive and negative outcomes published	Permission/prerequisite for continuation/operation	Yes
Poland	Single independent national QA agency	Certified	No HEI can choose a foreign QA agency	Programme	83%	Positive and negative outcomes published	Permission/prerequisite for continuation/operation	No
Portugal	Single independent national QA agency	Certified	Some HEIs can choose a foreign QA agency	Institutions & Programmes	100%	Positive and negative outcomes published	Permission/prerequisite for continuation/operation	Yes
Romania	Single independent national QA agency	Certified	All HEIs can choose a foreign agency	Institutions & Programmes	83%	Positive and negative outcomes published	Permission/prerequisite for continuation/operation	Yes
Slovakia	Government-dependent agency or ministry	Certified	No HEI can choose a foreign QA agency	No data available	0%	No data available	No data available	No
Slovenia	Single independent national QA agency	Not certified	No HEI can choose a foreign QA agency	Institutions & Programmes	100%	Positive and negative outcomes published	Permission/prerequisite for continuation/operation	Yes
Spain	Government-dependent agency or ministry	Certified	No HEI can choose a foreign QA agency	No data available	0%	No data available	No data available	No data available

Dimension / Country	Institutional, legal and international dimension			Methodologies of Assessment		B.4 Outcomes		
	Type of QA Agency	ESG Compliance	Openness to Foreign QAAs	Main Object of Evaluation	Issues Covered	Publication of Outcomes	Main Outcome	Impact on Funding
Sweden	Government-dependent agency or ministry	Certified	No HEI can choose a foreign QA agency	Programme	33%	Positive and negative outcomes published	Permission/prerequisite for continuation/operation	Yes
UK Scotland	Single independent national QA agency	Certified	No HEI can choose a foreign QA agency	Institution	83%	Positive and negative outcomes published	Formative advice on QA improvement	Yes

Country / Criteria	Dimension 1: Institutional dimension						
	Type of QA Agency				ESG Compliance		
	Government-dependent Agency or Ministry	Single Indepen-dent National QA Agency	Several Independent QA Agencies	No Data Available	Certified	Not Certified	No Data Available
Austria			x		x		
Belgium French		x			x		
Belgium Flemish		x			x		
Bulgaria		x			x		
Croatia		x			x		
Cyprus			x			x	
Czech Republic		x			x		
Denmark			x		x		
Estonia		x				x	
Finland		x			x		
France			x		x		
Germany			x		x		
Greece		x				x	
Hungary		x			x		
Ireland			x		x		
Italy		x			x		
Latvia		x			x		
Lithuania		x				x	
Luxembourg			x			x	
Malta							x
Netherland		x			x		
Poland		x			x		

	Dimension 1: Institutional dimension						
Country / Criteria	Type of QA Agency				ESG Compliance		
	Government-dependent Agency or Ministry	Single Indepen-dent National QA Agency	Several Independent QA Agencies	No Data Available	Certified	Not Certified	No Data Available
Portugal		x			x		
Romania		x			x		
Slovakia	x				x		
Slovenia		x				x	
Spain	x				x		
Sweden	x				x		
UK Scotland		x			x		

Country / Criteria	Dimension 2: Legal dimension						
	Openness to foreign QAAs				Obligation for internal QA		
	All HEIs can Choose a Foreign Agency	Some HEIs can Choose a Foreign QA Agency	No HEI can Choose a Foreign QA Agency	No Data Available	Yes	No	No Data Available
Austria		x			x		
Belgium French			x		x		
Belgium Flemish	x				x		
Bulgaria			x		x		
Croatia	x				x		
Cyprus		x			x		
Czech Republic			x		x		
Denmark		x			x		
Estonia	x					x	
Finland	x				x		
France			x		x		
Germany		x			x		
Greece			x		x		
Hungary			x		x		
Ireland			x		x		
Italy			x		x		
Latvia			x		x		
Lithuania	x				x		
Luxembourg			x		x		
Malta			x		x		
Netherland	x				x		

Country / Criteria	Dimension 2: Legal dimension						
	Openness to foreign QAAs				Obligation for internal QA		
	All HEIs can Choose a Foreign Agency	Some HEIs can Choose a Foreign QA Agency	No HEI can Choose a Foreign QA Agency	No Data Available	Yes	No	No Data Available
Poland			x		x		
Portugal		x			x		
Romania	x				x		
Slovakia			x			x	
Slovenia			x		x		
Spain			x		x		
Sweden			x		x		
UK Scotland			x		x		

Country / Criteria	Dimension 3: Methodologies of Quality Assurance				
	Main Object of Evaluation				Issues of the Bologna Process Covered
	Programme	Institution	Institutions & Programmes	No Data Available	
Austria			x		67%
Belgium French	x				100%
Belgium Flemish			x		67%
Bulgaria			x		83%
Croatia			x		83%
Cyprus			x		50%
Czech Republic	x				67%
Denmark	x				100%
Estonia			x		100%
Finland		x			83%
France			x		100%
Germany			x		83%
Greece	x				100%
Hungary			x		67%
Ireland		x			100%
Italy			x		100%
Latvia			x		100%
Lithuania			x		100%
Luxembourg			x		83%
Malta				x	0%
Netherland			x		83%
Poland	x				83%
Portugal			x		100%

	Dimension 3: Methodologies of Quality Assurance				
Country / Criteria	**Main Object of Evaluation**				**Issues of the Bologna Process Covered**
	Programme	**Institution**	**Institutions & Programmes**	**No Data Available**	
Romania			x		83%
Slovakia				x	0%
Slovenia			x		100%
Spain				x	0%
Sweden	x				33%
UK Scotland		x			83%

Country / Criteria	Dimension 4: Outcomes and Consequences									
	Publication of Outcomes				Main Outcome			Impact on Funding		
	Positive and negative outcomes published	Only Positive Outcomes Published	No Outcomes Published	No Data Available	Formative Advice on QA improve-ment	Permission / Prerequisite for Continuation or Operation	No Data Available	Yes	No	No Data Available
Austria	x						x		x	
Belgium French		x			x				x	
Belgium Flemish	x					x		x		
Bulgaria		x				x			x	
Croatia	x					x		x		
Cyprus		x					x		x	
Czech Republic	x					x		x		
Denmark	x						x	x		
Estonia	x					x		x		
Finland	x				x				x	
France	x						x	x		
Germany		x					x		x	
Greece	x				x				x	
Hungary	x					x			x	
Ireland	x						x		x	
Italy	x					x			x	
Latvia	x					x		x		
Lithuania	x					x		x		
Luxembourg	x				x			x		
Malta				x			x			x
Netherland	x					x		x		
Poland	x					x			x	
Portugal	x					x		x		
Romania	x					x		x		
Slovakia				x			x		x	
Slovenia	x					x		x		
Spain				x			x			x
Sweden	x					x		x		
UK Scotland	x				x			x		

ANNEX 4: RANKING RELATED INFORMATION

ANNEX 4A: DETAILS ON TEN SELECTED RANKINGS (INFORMATION EXTRACTED FROM THE OFFICIAL WEBSITES OF THE RESPECTIVE RANKINGS)

ANNEX 4B: GLOBAL RANKINGS – RESEARCH/STAFF-RELATED INDICATORS AND WEIGHTINGS (EXTENDED)

ANNEX 4C: BERLIN PRINCIPLES ON RANKING OF HIGHER EDUCATION INSTITUTIONS

ANNEX 4A: DETAILS ON TEN SELECTED RANKINGS

DESCRIPTION OF RANKING - TIMES HIGHER EDUCATION WORLD UNIVERSITY RANKINGS

Name of ranking organisation		**TES Global Ltd**
Background of organisation		Media - education publisher. A private equity-backed publishing company. Products include The Times Educational Supplement, FE Focus and Times Higher Education and our magazines, websites, events and exhibitions covering the complete professional educational field, from primary through to further and higher education.
Rankings offered by the ranking organisation	*Ranking 1*	World University Rankings
	Ranking 2	World Reputation Rankings
	Ranking 3	100 under 50
	Ranking 4	Asia University Rankings
	Ranking 5	BRICS & Emerging Economies Rankings
Award / rating / profiling		**THE Leadership & Management Awards**
Ranking analysed in the present study		**World University Rankings**
Acronym		**THE**
Cycle of publication/update of results	*Annual*	Yes
	First year of publication	Published with QS in the period 2004-2009; from 2010 onwards, with Thomson Reuters.
Geographical scope	*Global*	Yes
	World regions	Optional (Africa, Asia, Europe, N. America, Oceania, S. America)
	National	No
Level of ranking/analysis	*Institutional level (comparing universities)*	Yes
	Disciplines (e.g. social sciences, engineering)	Optional (Arts & Humanities, Clinical, Pre-clinical & Health, Engineering & Technology, Life Sciences, Physical Sciences, Social Sciences)
	Fields (e.g. history, physics)	No
	Programmes (e.g. MBA)	No
Publicity means	*Printed magazine/ newspapers*	Yes
	Special publication	Free copy of the Times Higher Education World University Rankings 2014-2015 supplement emailed upon request on the condition that "TES Global (publisher of THE) may contact the subscribers with details of our products and services or to undertake research."
	Website (URL)	http://www.timeshighereducation.co.uk/world-university-rankings/2014-15/world-ranking
	Others	iPhone App

Presentation of rankings	*Numbered*	Yes
	Both readymade and user-created league tables	Yes
	User-created league tables	View by region and view by subject areas (creating different league tables) possible. On each league table, users can opt to see HEIs' varying strengths in five different ranking criteria, but the default ranking order remains unchanged.
	Starred /badged	Universities that display a blue icon feature an enhanced institutional profile, which can be viewed by clicking the institution's name.
	Active links to ranked universities	No, but a map, and a graph of the sub-scores in the profile page. "Blue badged" HEIs may have longer profiles with photo galleries, video, a link to the official website and other social media links, a map and description, etc.
	Total number of universities considered	Not clearly stated.
	Total number of universities ranked	400
	Individually ranked institutions up to position X	200
	Broadbanding from position Y onwards	201th onwards, each band 25 universities. From 301th onwards, each band 50 universities.
	Published scores and sub-scores	Up to position 200.
Advertisement on the ranking website	*Education related ads*	Yes
	Non-education related ads	Yes
	Study / job portals	(Job portal) http://jobs.timeshighereducation.co.uk/
Events / consultancy		Times Higher Education MENA Universities Summit in Doha, Qatar in 2015.
Stated purpose of the ranking		"The Times Higher Education World University Rankings 2014-2015 list the best global universities and are the only international university performance tables to judge world class universities across all of their core missions - teaching, research, knowledge transfer and international outlook. The top universities rankings employ 13 carefully calibrated performance indicators to provide the most comprehensive and balanced comparisons available, which are trusted by students, academics, university leaders, industry and governments."
Is the methodology publicly available online?		Yes

INDICATOR, WEIGHT AND DEFINITION

Indicator	Weight	Definition
International outlook: People, research	7.5%	This category of indicators looks at diversity on campus and to what degree academics collaborate with international colleagues on research projects - both signs of how global an institution is in its outlook. - A 2.5% weighting is adopted for the ratio of international to domestic students. - Another 2.5% is adopted for the ratio of international to domestic staff. - A 2.5% is adopted for the proportion of a university's total research journal publications that have at least one international co-author and reward higher volumes. This indicator is normalised to account for a university's subject mix and uses the same five-year window as the "Citations: research influence" category.
Research: Volume, income, reputation	30%	This category is made up of three indicators. - 18% is adopted for a university's reputation for research excellence among its peers, based on the 10,000-plus responses to our annual academic reputation survey. - 6% looks at university research income, scaled against staff numbers and normalised for purchasing-power parity. This indicator is fully normalised to take account of each university's distinct subject profile, reflecting the fact that research grants in science subjects are often bigger than those awarded for the highest- quality social science, arts and humanities research. - 6% is adopted for a simple measure of research productivity - research output scaled against staff numbers. This counts the number of papers published in the academic journals indexed by Thomson Reuters per academic, scaled for a university's total size and also normalised for subject.
Citations: Research influence	30%	The research influence indicator is weighted at 30% of the overall score. It is the single most influential of the 13 indicators, and looks at the role of universities in spreading new knowledge and ideas. It captures the number of times that a university's published work is cited by scholars globally, using data from the data supplier Thomson Reuters. The data are drawn from the 12,000 academic journals indexed by Thomson Reuters' Web of Science database and include all indexed journals published between 2008 and 2012. Citations to these papers made in the six years from 2008 to 2013 are also collected. The data are fully normalised to reflect variations in citation volume between different subject areas. This means that institutions with high levels of research activity in subjects with traditionally high citation counts do not gain an unfair advantage. THE excludes from the rankings any institution that publishes fewer than 200 papers a year.

Industry income: Innovation	2.5%	This category seeks to capture such "knowledge transfer" by looking at how much research income an institution earns from industry, scaled against the number of academic staff it employs.
Teaching: The learning environment	30%	This category employs five separate performance indicators designed to provide a clear sense of the teaching and learning environment of each institution from both the student and the academic perspective. The dominant indicator here uses the results of the world's largest invitation-only academic reputation survey. Thomson Reuters carried out its latest reputation survey - a worldwide poll of experienced scholars - in spring 2014. It examined the perceived prestige of institutions in both research and teaching based on 10,000 responses. - 15% of the overall rankings score is adopted for the results of the survey with regard to teaching make up. - 4.5% goes to a staff-to-student ratio as a simple (and admittedly crude) proxy for teaching quality. - 2.25% for doctorate-to-bachelor's ratio, based on the belief that institutions with a high density of research students are more knowledge-intensive and that the presence of an active postgraduate community is a marker of a research-led teaching environment valued by undergraduates and postgraduates alike. - 6% is adopted for data on the number of doctorates awarded by an institution, scaled against its size as measured by the number of academic staff it employs. As well as giving a sense of how committed an institution is to nurturing the next generation of academics, a high proportion of postgraduate research students also suggests the provision of teaching at the highest level that is thus attractive to graduates and effective at developing them. - 2.25% in this category is a simple measure of institutional income scaled against academic staff numbers. This figure, adjusted for purchasing-power parity so that all nations may compete on a level playing field, indicates the general status of an institution and gives a broad sense of the infrastructure and facilities available to students and staff.

DESCRIPTION OF RANKING - QS WORLD UNIVERSITY RANKINGS

Name of ranking organisation		**QS Quacquarelli Symonds Limited**
Background of organisation		Media, events and software company in the higher education field. QS is a medium-sized company with over 150 staff in offices throughout the world: London, Paris, Singapore, Shanghai, Boston, Washington DC, Johannesburg and Alicante. It organises the largest business education events in the world, the QS World MBA Tour, the QS World Executive MBA Tour and the leading postgraduate studies information event, the QS World Grad School Tour, amongst an extensive product range including print and online publications and software solutions.
Rankings offered by the ranking organisation	*Ranking 1*	QS World University Rankings
	Ranking 2	QS World University Rankings by Subject
	Ranking 3	QS World University Rankings by Faculty
	Ranking 4	QS University Rankings: Asia
	Ranking 5	QS University Rankings: Latin America
	Ranking 6	QS University Rankings: BRICS
	Ranking 7	QS Best Student Cities
Award / rating / profiling		QS Stars University Ratings
Ranking analysed in the present study		QS World University Rankings
Acronym		QS
Cycle of publication/update of results	*Annual*	Yes
	First year of publication	2004 (continued with old methodology after the split with THE).
Geographical scope	*Global*	Yes
	World regions	Optional (Africa, Asia, Europe, N. America, Oceania, S. America)
	National	Optional
Level of ranking/analysis	*Institutional level (comparing universities)*	Institutional ranking by default, but the interactive ranking table leaves open the options to sort the results by country, region and subject. It is also possible to sort the ranking results based on the six individual indicators used.
	Disciplines (e.g. social sciences, engineering)	Optional (Arts & Humanities, Engineering & Technology, Life Sciences and Medicine, Natural Sciences, Social Sciences & Management)
	Fields (e.g. history, physics)	No

	Programme (e.g. MBA)	No
Publicity means	*Part of a printed magazine/ newspapers*	No
	Special publication	A free supplement includes: - Expert commentary on this year's results - Exploration of regional and national trends - Analysis of developments over the past decade - Ranking data for the world's top 500 universities - Students' perspectives on the rankings. Users may login to download the supplement by agreeing to become a member of TopUniversities and agreeing to its User Agreement, Privacy Policy and Cookie Policy
	Website (URL)	http://www.topuniversities.com/university-rankings/world-university-rankings/2014
	Others	Apps for iPhone and Android phones. Own blog, forum and a list of (media) partners.
Presentation of rankings	*Numbered*	Yes
	Both readymade and user-created league tables	Yes
	User-created league tables with clearly limited options	Users can sort the league table by applying filters: faculty, location, region, ranking criteria. The default ranking positions change accordingly.
	Starred /Badged	QS Stars, which is an in-depth rating system for universities. The QS Stars ratings were said to have been designed for use as a navigation tool in users' decision making process by providing a wider picture of an institution's qualities that are relevant for the users; looking at criteria such as the employability of graduates, sports facilities and others. Universities are awarded with a "Star" rating, ranging from 0 to 5 Star+, depending on the number of points achieved through the evaluation. Over 50 different indicators contribute towards the overall assessment. These are grouped into eleven categories, from which each institution is evaluated in a total of eight: Research, Teaching, Employability, Internationalization, Facilities, Online/Distance learning, Social Responsibility, Innovation, Arts & Culture, Inclusiveness, Specialist Criteria (Excellence in a narrow field is as valid a claim to world-class status as competence in the round. These criteria are designed to extend credit where

		it's due. This category looks at accreditations and discipline rankings.)
	Active links to ranked universities	No, but a short profile with a map and star ratings. Users must log in for more information.
	Total number of universities considered	3000
	Total number of universities ranked	800
	Individually ranked institutions up to position X	400
	Broadbanding from position Y onwards	401th onwards, each band 10 universities. From 500th onwards, each band 50 universities. From 700th onwards, 100 universities in a band.
	Published scores and sub-scores	Up to position 400
Advertisement on the ranking website	*Education related ads*	Yes
	Non-education related ads	No
	Study / job portals	(Study portal): http://www.topuniversities.com/where-to-study/region/usa-canada/guide ; (online courses) http://www.topuniversities.com/courses
Events / consultancy		QS World MBA Tour in 70 cities in 39 countries for MBA candidates to meet face-to-face with business school admissions personnel. The QS World Grad School Tour in 47 cities in 31 countries for promoting postgraduate programmes to masters and PhD students.
Stated purpose of the rankings		"At QS we believe that education and career decisions are too important to leave to chance, so we want to ensure candidates have access to the best tools and the best independent expert information before making a decision. Our ambition is to be the world's leading media, events and software company in the higher education field."
Is the methodology publicly available online?		Yes

INDICATOR, WEIGHT AND DEFINITION

Indicator	Weight	Definition
Academic reputation	40%	Academic reputation is measured using a global survey, in which academics are asked to identify the institutions where they believe the best work is currently taking place within their field of expertise. For the 2014/15 edition, the rankings draw on almost 63,700 responses from academics worldwide, collated over three years. Only participants' most recent responses are used, and they cannot vote for their own institution. Regional weightings are applied to counter any discrepancies in response rates. The advantage of this indicator is that it gives a more equal weighting to different discipline areas than research citation counts. Whereas citation rates are far higher in subjects like biomedical sciences than they are in English literature, for example, the academic reputation survey weights responses from academics in different fields equally. It also gives students a sense of the consensus of opinion among those who are by definition experts. Academics may not be well positioned to comment on teaching standards at other institutions, but it is well within their remit to have a view on where the most significant research is currently taking place within their field.
Employer reputation	10%	The employer reputation indicator is also based on a global survey, taking in almost 28 800 responses for the 2014/15 edition. The survey asks employers to identify the universities they perceive as producing the best graduates. This indicator is unique among international university rankings. The purpose of the employer survey is to give students a better sense of how universities are viewed in the job market. A higher weighting is given to votes for universities that come from outside of their own country, so it's especially useful in helping prospective students to identify universities with a reputation that extends beyond their national borders.
Student-to-faculty ratio	20%	This is a simple measure of the number of academic staff employed relative to the number of students enrolled. In the absence of an international standard by which to measure teaching quality, it provides an insight into the universities that are best equipped to provide small class sizes and a good level of individual supervision.
Citations per faculty	20%	This indicator aims to assess universities' research output. A 'citation' means a piece of research being cited (referred to) within another piece of research. Generally, the more often a piece of research is cited by others, the more influential it is. So the more highly cited research papers a university publishes, the stronger its research output is considered. QS collects this information using Scopus, the world's largest database of research abstracts and citations. The latest five complete years of data are used, and the total

		citation count is assessed in relation to the number of academic faculty members at the university, so that larger institutions don't have an unfair advantage.
International faculty ratio & international student ratio	5% & 5%	The last two indicators aim to assess how successful a university has been in attracting students and faculty members from other nations. This is based on the proportion of international students and faculty members in relation to overall numbers. Each of these contributes 5% to the overall ranking results. Alongside the main QS World University Rankings®, the QS World University Rankings by Faculty are also published. These provide rankings of the world's top 400 universities in five broad faculty areas: arts & humanities, engineering & technology, life sciences & medicine, natural sciences, and social sciences & management. These rankings use an adapted methodology, drawing on the academic and employer surveys, as well as citations data.

DESCRIPTION OF RANKING – USNWR BEST GLOBAL UNIVERSITIES

Name of ranking organisation		**U.S. News & World Report**
Background of organisation		A multi-platform, publisher of news and information, which includes www.usnews.com and www.rankingsandreviews.com, as well as the digital-only U.S. News Weekly magazine. U.S. News publishes annual print and e-book versions of its rankings of Best Colleges, Best Graduate Schools and Best Hospitals. In 2012 U.S. News launched a conference division focusing on important national conversations and solutions in STEM Education and Hospitals of Tomorrow. The company is privately owned by Mortimer B. Zuckerman, a real estate developer and publisher since 1984. The last print issue of U.S. News & World Report magazine was published in December 2010 completing the transition to digital. This move made it possible for the U.S. News brand of service journalism to explode with the introduction of several rankings products to benefit consumers while still maintaining the news and analysis content.
Rankings offered by the ranking organisation	*Ranking 1*	Top National Universities
	Ranking 2	Top Liberal Arts Colleges
	Ranking 3	Best Business Schools
	Ranking 4	Best Education Schools
	Ranking 5	Best Engineering Schools
	Ranking 6	Best Law Schools
	Ranking 7	Best Medical Schools
	Ranking 8	Best High Schools
	Ranking 9	Best Online Programs
	Ranking 10	Best Global Universities
	Ranking 11	Best Arab Region Universities
Award / rating / profiling		Nil
Ranking analysed in the present study		Best Global Universities
Acronym		BGU
Cycle of publication/update of results	*Annual*	Yes
	First year of publication	2010 (published with QS based on THE-QS Ranking 2009), renewed in 2014 (based on Thomson Reuters InCitesTM)
Geographical scope	*Global*	Yes
	National	Optional filter (Canada, China, France, Germany, Italy, Japan, Netherlands, South Korea, Spain, Sweden, United Kingdom)
	World region	Optional filter (Asia, Australia/New Zealand, Europe, Latin America)

	City	Optional (by search)
	Name of university	Optional (by search)
Level of ranking/analysis	*Institutional level (comparing universities)*	Yes
	Disciplines (e.g. social sciences, engineering)	No
	Fields (e.g. history, physics)	Optional (Agricultural Sciences, Biology and Biochemistry, Chemistry, Clinical Medicine, Computer Science, Economics and Business, Engineering, Environment/ Ecology, Geosciences, Immunology, Materials Science, Mathematics, Microbiology, Molecular Biology and Genetics, Neuroscience and Behaviour Pharmacology and Toxicology Physics, Plant and Animal Science Psychiatry/Psychology, Social Sciences and Public Health, Space Science)
	Programme (e.g. MBA)	No
Publicity	*Part of a printed magazine/ newspapers*	No, but digital platform.
	Special publication	Nil
	Website (URL)	http://www.usnews.com/education/best-global-universities/rankings
	Others	Nil
Presentation of rankings	*Numbered*	Yes
	Both readymade and user-created league tables	Yes
	User-created league tables	Yes (filters only)
	Starred /Badged	No
	Active links to ranked universities	No. But to a university profile with a link to the website, an online map, sub-ranking scores, address of institution.
	Total number of universities considered	A pool of 750 universities based on Thomson Reuters InCitesTM research analytics solutions
	Total number of universities ranked	500
	Individually ranked institutions up to position X	500 in principle
	Broadbanding from position Y onwards	No strictly defined broadbanding but tied ranks often appear after the 30th
	Published scores and sub-scores	Yes

Advertisement on the ranking website	*Education related ads*	Yes
	Non-education related ads	Yes
	Study / job portals	No
Events / consultancy		No
Stated purpose of the rankings		"The U.S. News rankings, based on schools' academic research and reputation, allow students to compare universities around the world. These institutions from the U.S. and nearly 50 other countries have been ranked based on 10 indicators that measure their academic research performance and their global and regional reputations. Students can use these rankings to explore the higher education options that exist beyond their own countries' borders and to compare key aspects of schools' research missions. These are the world's top 500 universities."
Is the methodology publicly available online?		Yes

INDICATOR, WEIGHT AND DEFINITION

Indicator	Weight	Definition
Global research reputation	12.5%	Results from Thomson Reuters' Academic Reputation Survey were used to create the two reputation indicators used in our ranking analysis. The survey, which aimed to create a comprehensive snapshot of academics' opinions about world universities, had respondents give their views of the disciplinary programs with which they were familiar. This method allowed respondents to rate universities at the field and department level, rather than at the institution level, creating a more specific and accurate measurement of a university's reputation as a whole. In order to appropriately represent all regions, Thomson Reuters took steps to overcome language bias, differing response rates and the geographic distribution of researchers. These steps included: Sending an invitation-only survey to academics selected from Thomson Reuters' databases of published research, based on the estimated geographic proportions of academics and researchers across the globe Providing accessibility in 10 languages Rebalancing the survey's final results based on the geographic distribution of researchers in order to overcome differing response rates The results of the survey were used in two separate ranking indicators as follows. This indicator reflects the aggregation of the most recent five years of results of the Academic Reputation Survey for the best universities globally for research
Regional research reputation	12.5%	This indicator reflects the aggregation of the most recent five years of results of the Academic Reputation

		Survey for the best universities for research in the region; regions were determined based on the United Nations definition. This indicator had the effect of significantly increasing the international diversity of the rankings, since it focused on measuring academics' opinions of other universities within their region. This is the first time this indicator has been used in any global ranking.
Publications	12.5%	The bibliometric indicators used in our ranking analysis are based on data from the Web of Science for the five-year period from 2008 to 2012. The Web of science™ is a Web-based research platform that covers more than 12 000 of the most influential and authoritative scholarly journals worldwide in the sciences, social sciences, and arts and humanities. This is a measure of the overall research productivity of a university, based on the total number of scholarly papers (reviews, articles and notes) that contain affiliations to a university and are published in high-quality, impactful journals. This indicator is closely linked to the size of the university. It is also influenced by the discipline focus of the university, as some disciplines, particularly medicine, publish more than others.
Normalized citation impact	10%	The total number of citations per paper represents the overall impact of the research of the university and is independent of the size or age of the university; the value is normalized to overcome differences in research area, the publication year of the paper and publication type. NCI is considered one of the core measures of research performance and is used by various research evaluation bodies globally. The subject fields used in the analysis came from Thomson Reuters' InCites™ product, which helps institutions evaluate research output, performance and trends; understand the scope of an organization's scholarly contributions; and articulate outcomes to inform research priorities. InCites utilizes the content and citation indicators found in the Web of Science™.
Total citations	10%	This indicator measures how influential the university has been on the global research community. It is determined by multiplying the publications ranking factor by the normalized citation impact factor. Total citations have been normalized to overcome differences in research area, publication year of the paper and publication type.
Number of publications that are among the 10 percent most cited	12.5%	This indicator reflects the number of papers that have been assigned as being in the top 10 percent of the most highly cited papers in the world for their respective fields. Each paper is given a percentile score that represents where it falls, in terms of citation rank, compared with similar papers (same publication year, subject and document type). As the number of highly cited papers is dependent on the size of the university, the indicator can be considered a robust indication of how much excellent research the university produces.

Percentage of total publications that are among the 10 percent most cited	10%	This indicator is the percentage of a university's total papers that are in the top 10 percent of the most highly cited papers in the world (per field and publication year). It is a measure of the amount of excellent research produced by the university and is independent of the university's size.
International collaboration	10%	This indicator is the proportion of the institution's total papers that contain international co-authors divided by the proportion of internationally co-authored papers for the country that the university is in. It shows how international the research papers are compared with the country in which the institution is based. International collaborative papers are considered an indicator of quality, as only the best research will be able to attract international collaborators.
Number of Ph.D.s awarded	5%	Publicly available data sources were used to create the school-level indicators. This indicator reflects the total number of doctoral degrees awarded in 2012. The number of doctorates awarded can be considered an alternative indicator of research output and is linked to volume.
Number of Ph.D.s awarded per academic staff member	5%	This is the number of Ph.D.s awarded per the number of academic faculty members for the same year. This is a size-independent measure of the education environment at the university.

DESCRIPTION OF RANKING - ACADEMIC RANKING OF WORLD UNIVERSITY

Name of ranking organisation		**Center for World-Class Universities of Shanghai Jiao Tong University (CWCU) and its spin-off ShanghaiRanking Consultancy**
Background of organisation		The Academic Ranking of World Universities (ARWU) is conducted by researchers at the Center for World-Class Universities of Shanghai Jiao Tong University (CWCU). Since 2009, ARWU is published and copyrighted by ShanghaiRanking Consultancy. ShanghaiRanking Consultancy publishes the annual ARWU ranking, organises a biannual conference, developes a database and a clearinghouse on World-Class Universities, carries out academic studies and provides consultation reports.
Rankings offered by the ranking organisation	*Ranking 1*	Academic Ranking of World University
	Ranking 2	ARWU-Field (Natural Sciences and Mathematics, Engineering / Technology and Computer Sciences, Life and Agriculture Sciences, Clinical Medicine and Pharmacy, Social Sciences) since 2007
	Ranking 3	ARWU-Subject (Mathematics, Physics, Chemistry, Computer Science, Economics /Business) since 2009
	Ranking 4	Greater China Ranking, since 2011
	Ranking 5	Macedonian Ranking, since 2011
Award / rating / profiling		Global Research University Profiles (GRUP)
Ranking analysed in the present study		Academic Ranking of World University
Acronym		ARWU
Cycle of publication/update of results	*Annual*	Yes
	First year of publication	2003
Geographical scope	*Global*	Yes
	World region	No
	National	Optional filter (Australia, Austria, Belgium, Brazil, Canada, China, Denmark, Finland, France, Germany, Hong Kong, Ireland, Israel, Italy, Japan, Netherlands, New Zealand, Norway, Portugal, Russia, South Korea, Saudi Arabia, South Africa, Spain, Sweden, Switzerland, Taiwan, UK, USA.) National ranking positions shown in a separate column.
Level of ranking/analysis	*Institutional level (comparing universities)*	Yes
	Disciplines (e.g. social sciences, engineering)	Yes

	Fields (e.g. history, physics)	Yes
	Programme (e.g. MBA)	No
Publicity means	*Part of a printed magazine/ newspapers*	No
	Special publication	Yes, free download online: https://docs.google.com/file/d/0Bw2rAawlHlvBT0lnVWtQR3BSVlE/edit?pli=1
	Website (URL)	http://www.shanghairanking.com/
	Others	No
Presentation of rankings	*Numbered*	Yes
	Readymade league table(s)	Yes (users can choose to see the scores of 6 indicators, but this does not affect the global rankings column)
	Both readymade and user-created league tables	No
	Starred /Badged	No
	Active links to ranked universities	No, but a short profile page with ranking trends.
	Total number of universities considered	1200
	Total number of universities ranked	500
	Individually ranked institutions up to position X	100
	Broadbanding from position Y onwards	101th to 200th every 50 universities form a band, from 200th onwards; every 100 universities form a band.
	Published scores and sub-scores	Total scores published up to 100th; indicator scores for all 500.
Advertisement on the ranking website	*Education related ads*	No
	Non-education related ads	No
	Study / job portals	No
Events / consultancy		CWCU initiated the "First International Conference on World-Class Universities" (WCU-1) in 2005 and organizes the conference every second year
Stated purpose of the rankings		"The initial purpose of ARWU was to find the global standing of top Chinese universities. In order to better meet the diversified needs for the global comparison of universities, besides ARWU, CWCU developed the Academic Ranking of World Universities by Broad Subject Fields (ARWU-FIELD) in 2007 and Academic Ranking of World Universities by Subject Fields (ARWU-SUBJECT) in 2009. ARWU-

	FIELD provides the world's top 200 universities in five broad subject fields, including Natural Sciences and Mathematics, Engineering/Technology and Computer Sciences, Life and Agriculture Sciences, Clinical Medicine and Pharmacy, and Social Sciences. ARWU-SUBJECT publishes the world's top 200 universities in five ranked subjects, including Mathematics, Physics, Chemistry, Computer Science and Economics/Business. CWCU endeavours to build databases of major research universities in the world and clearinghouse of literature on world-class universities, and provide consultation for governments and universities."
Is the methodology publicly available online?	Yes

INDICATOR, WEIGHT AND DEFINITION

Indicator	Weight	Definition
Alumni of an institution winning Nobel Prizes and Fields Medals	10%	The total number of the alumni of an institution winning Nobel Prizes and Fields Medals. Alumni are defined as those who obtain bachelor, Master's or doctoral degrees from the institution. Different weights are set according to the periods of obtaining degrees. The weight is 100% for alumni obtaining degrees in 2001-2010, 90% for alumni obtaining degrees in 1991-2000, 80% for alumni obtaining degrees in 1981-1990, and so on, and finally 10% for alumni obtaining degrees in 1911-1920. If a person obtains more than one degrees from an institution, the institution is considered once only.
Staff of an institution winning Nobel Prizes and Fields Medals	20%	The total number of the staff of an institution winning Nobel Prizes in Physics, Chemistry, Medicine and Economics and Fields Medal in Mathematics. Staff is defined as those who work at an institution at the time of winning the prize. Different weights are set according to the periods of winning the prizes. The weight is 100% for winners after 2011, 90% for winners in 2001-2010, 80% for winners in 1991-2000, 70% for winners in 1981-1990, and so on, and finally 10% for winners in 1921-1930. If a winner is affiliated with more than one institution, each institution is assigned the reciprocal of the number of institutions. For Nobel prizes, if a prize is shared by more than one person, weights are set for winners according to their proportion of the prize.
Highly cited researchers in 21 broad subject categories	20%	The number of Highly Cited Researchers selected by Thomson Reuters. Thomson Reuters had issued two lists of Highly Cited Researchers: the old list was first issued in 2001, it identified more than 6,000 researchers and the number of Highly Cited Researcher of an institution on that list was used in ARWU from 2003 to 2013. In 2014, Thomson Reuters developed a new list of Highly Cited Researchers with some 3,000 names based on a different methodology. In order to have a relatively

		smooth transition to the new list of Highly Cited Researchers and avoid too much fluctuations of ranking results due to the methodological change in developing Highly Cited Researchers list, both the old Highly Cited Researchers list and the new Highly Cited Researchers list are used in the calculation of HiCi indicator in ARWU 2014, and they are equally weighted. The score on HiCi of an institution in ARWU 2014 is the sum of its score for the old list and that for the new list. An institution's HiCi score for the old list is the same as its HiCi score in ARWU 2013, and an institution's HiCi score for the new list depends on its number of Highly Cited Researchers on the new list. It is worth noting that, upon the suggestion of many institutions and researchers including some Highly Cited Researchers, only the primary affiliations of new Highly Cited Researchers are considered in the calculation of an institution's HiCi score for the new list.
Papers published in Nature and Science*	20%	The number of papers published in Nature and Science between 2009 and 2013. To distinguish the order of author affiliation, a weight of 100% is assigned for corresponding author affiliation, 50% for first author affiliation (second author affiliation if the first author affiliation is the same as corresponding author affiliation), 25% for the next author affiliation, and 10% for other author affiliations. Only publications of 'Article' type is considered.
Papers indexed in Science Citation Index-expanded and Social Science Citation Index	20%	Total number of papers indexed in Science Citation Index-Expanded and Social Science Citation Index in 2013. Only publications of 'Article' type is considered. When calculating the total number of papers of an institution, a special weight of two was introduced for papers indexed in Social Science Citation Index.
Per capita academic performance of an institution	10%	The weighted scores of the above five indicators divided by the number of full-time equivalent academic staff. If the number of academic staff for institutions of a country cannot be obtained, the weighted scores of the above five indicators is used. For ARWU 2014, the numbers of full-time equivalent academic staff are obtained for institutions in USA, UK, France, Canada, Japan, Italy, China, Australia, Netherlands, Sweden, Switzerland, Belgium, South Korea, Czech, Slovenia, New Zealand etc.
* For institutions specialised in humanities and social sciences, Nature and Science is not considered and the weighting of this indicator is relocated to other indicators.		

DESCRIPTION OF RANKING – CWTS LEIDEN RANKING 2014

Name of ranking organisation		**Centre for Science and Technology Studies, Leiden University, The Netherlands and its spin-off CWTS B.V.**
Brief description of organisation		CWTS B.V. (Centre for Science and Technology Studies) is an independent contract research organization that provides consultancy services on monitoring and evaluation of research, advanced analytics, training and education. Leiden University's Centre for Science and Technology Studies forms the core of the company. The strong relationship with this institute ensures that CWTS B.V. can utilise state-of-the-art bibliometric techniques and indicators.
Names of rankings offered by the ranking organisation	*Ranking* 1	**CWTS Leiden Ranking 2014**
Award / rating / profiling		Nil
Ranking analysed in the present study		CWTS Leiden Ranking 2014
Acronym		Leiden
Cycle of publication/update of results	*Annual*	Yes
	First year of publication	2011
Geographical scope	*Global*	Yes
	World region	Optional filter (Africa, Asia, Europe, N. America, S. America, Oceania)
	National	Optional filter
Level of ranking/analysis	*Institutional level (comparing universities)*	Yes
	Disciplines (e.g. social sciences, engineering)	Yes (Cognitive Sciences, Earth and Environmental Sciences, Life Sciences, Maths, Computer Sciences and Engineering, Medical Sciences, Natural Sciences, Social Sciences)
Publication	*Part of a printed magazine/ newspapers*	No
	Special publication	No (only a press release)
	Website (URL)	http://www.leidenranking.com/
	Others	No
Presentation of rankings	*Numbered*	yes
	Both readymade and user-created league tables	Yes. There is a ranking by default based on impact indicators.
	User-created league tables with clearly limited options	Yes. Users can customize the rankings with choices of field, region, country and indicators (impact vs collaboration indicators)

	Starred /Badged	No, but shown "stability level" of individual universities
	Active links to ranked universities	No
	Total number of universities considered	Not clearly stated. The CWTS Leiden Ranking 2014 is based on Web of Science indexed publications from the period 2009–2012.
	Total number of universities ranked	750 (since 2014)
	Individually ranked institutions up to position X	750
	Broadbanding from position Y onwards	No
	Published scores and sub-scores	Yes
Advertisement on the ranking website	*Education related ads*	No
	Non-education related ads (describe)	No
	Study / job portals	no
Events / consultancy		Consultancy products of CWTS B.V:
Stated purpose of the rankings		"Using a sophisticated set of bibliometric indicators, the ranking aims to provide highly accurate measurements of the scientific impact of universities and of universities' involvement in scientific collaboration. CWTS B.V.'s reports are based on highly advanced bibliometrics, mapping and network analyses. These reports provide clients with a well-founded basis for making key strategic decisions with respect to improving their research performance. This gives them real added value because it significantly expands and improves their funding opportunities."
Is the methodology publicly available online?		Yes

INDICATOR, WEIGHT AND DEFINITION

Indicator	Weight	Definition
MCS (mean citation score)	n.a.	The average number of citations of the publications of a university.
MNCS (mean normalized citation score)	n.a.	The average number of citations of the publications of a university, normalized for field differences and publication year. An MNCS value of two for instance means that the publications of a university have been cited twice above world average.
PP(top 10%) (proportion of top 10% publications)	n.a.	The proportion of the publications of a university that, compared with other publications in the same field and in the same year, belong to the top 10% most frequently cited.
PP(collab) (proportion of interinstitutional collaborative publications)	n.a.	The proportion of the publications of a university that have been co-authored with one or more other organizations.
PP(int collab) (proportion of international collaborative publications)	n.a.	The proportion of the publications of a university that have been co-authored by two or more countries.
PP(UI collab) (proportion of collaborative publications with industry)	n.a.	The proportion of the publications of a university that have been co-authored with one or more industrial partners. For more details, see University-Industry Research Connections 2013.
PP(<100 km) (proportion of short distance collaborative publications)	n.a.	The proportion of the publications of a university with a geographical collaboration distance of less than 100 km, where the geographical collaboration distance of a publication equals the largest geographical distance between two addresses mentioned in the publication's address list.
PP(>1000 km) (proportion of long distance collaborative publications)	n.a.	The proportion of the publications of a university with a geographical collaboration distance of more than 1000 km.

DESCRIPTION OF RANKING –U-MULTIRANK

Name of ranking organisation		**A EU-funded consortium**
Background of organisation		U-Multirank is prepared with seed funding from the European Union and led by a consortium headed by Professor Dr. Frans van Vught of the Center for Higher Education Policy Studies (CHEPS) in the Netherlands and Professor Dr. Frank Ziegele of the Centre for Higher Education (CHE) in Germany. Other partner organisations include the Centre for Science and Technology Studies from Leiden University (CWTS), Catholic University Leuven, academic publishers Elsevier, the Bertelsmann Foundation, Push and software firm Folge 3.
Names of rankings offered by the ranking organisation	*Ranking 1*	**U-Multirank (for students)**
	Ranking 2	**U-Multirank (compare)**
	Ranking 3	**U-Multirank (at a glance)**
	Ranking 4	**U-Multirank (readymade)**
Award / rating / profiling		Nil
Ranking analysed in the present study		**U-Multirank**
Acronym		**U-Multirank**
Cycle of publication/update of results	*Annual*	No
	First year of publication	2014
Geographical scope	*Global*	Yes
	World regions	Optional filter (Africa, Asia, Europe, Latin America, North America, Oceania)
	National	Optional filter (one of the filtering criteria)
Level of ranking/analysis	*Institutional level (comparing universities)*	Yes (based on discipline choices below, and institution types, and many other questions on what the students want or don't care)
	Disciplines (e.g. social sciences, engineering)	Yes (Education, Humanities and Arts, Social Sciences, Business and Law, Engineering, Science, Agriculture, Health and Social Services, Services)
	Fields (e.g. history, physics)	Yes (Physics, Electrical Engineering, Mechanical Engineering, Business Studies)
	Programme (e.g. MBA)	Yes, but more like ratings than rankings. One finds the programmes only in the individual profiles of the universities.
Publicity means	*Part of a printed magazine/ newspapers*	No
	Website (URL)	http://www.u-multirank.eu/
	Others	No
Presentation of rankings	*Numbered*	No (but universities may be "shown first" according to indicators: To assist U-Multirank users in producing their results, the interactive web tool can sort universities alphabetically or sort them based on the scores for a particular indicator. As an extra service, users can follow an approach similar to the Olympic medal table, where universities with the highest number of

		"very good" scores ("A" scores in the ranking tool) would be shown first in the table.
	Both readymade and user-created league tables	Yes
	User-created league tables with clearly limited options	Yes
	Starred /Badged	No. Although stars is used as bullets in place of ordinal numbers
	Active links to ranked universities	No, but to a profile of the university with a map, address of the university, website, the in-depth profile of the university.
	Total number of universities considered	Not clearly stated
	Total number of universities ranked	More than 850 higher education institutions, 1,000 faculties and 5,000 study programmes from 74 countries
	Individually ranked institutions up to position X	No
	Broadbanding from position Y onwards	No
	Published scores and sub-scores	No (visualised circles of different sizes, colours and symbols)
Advertisement on the ranking website	*Education-related ads*	No
	Non-education related ads	No
	Study / job portals	No
Events / consultancy		No
Stated purpose of the rankings		"U-Multirank is a new multi-dimensional, user-driven approach to international ranking of higher education institutions. The dimensions it includes are teaching and learning, research, knowledge transfer, international orientation and regional engagement. Based on empirical data U-Multirank compares institutions with similar institutional profiles and allows users to develop personalised rankings by selecting performance measures/indicators in terms of their own preferences."
Is the methodology publicly available online?		Yes

INDICATOR, WEIGHT AND DEFINITION

Indicator	Weight	Definition
Bachelor graduation rate	n.a.	The percentage of new entrants that successfully completed their bachelor program. The graduation rate shows how well the university's programmes are organised and reflects the effectiveness of its teaching.
Masters graduation rate	n.a.	The percentage of new entrants that successfully completed their master program. The graduation rate shows how well the university's programmes are organised and reflects the effectiveness of its teaching.
Graduating on time (bachelors)	n.a.	The percentage of graduates that graduated within the time expected (normative time) for their bachelor programme. The time to degree reflects how well the university's programmes are organised and shows the effectiveness of its teaching.
Graduating on time (masters)	n.a.	The percentage of graduates that graduated within the time expected (normative time) for their masters programme. The time to degree reflects how well the university's programmes are organised and shows the effectiveness of its teaching.
External research income	n.a.	Revenue for research that is not part of a core (or base) grant received from the government. Includes research grants from national and international funding agencies, research councils, research foundations, charities and other non-profit organizations. Measured in € 1,000s, using Purchasing Power Parities (PPP). Expressed per FTE academic staff. The indicator expresses the institution's success in attracting grants in national and international competitive, peer reviewed programmes. This reflects the quality of an institution's research.
Research publications (size-normalised)	n.a.	The number of research publications (indexed in the Web of Science database), where at least one author is affiliated to the university (relative to the number of students). The number of publications in academic journals is a measure of the institution's research activity and its capability in producing research publications at the international level. Correcting for the size of the institution (approximated by student enrolments) enables a more fair comparison to other institutions.
Art related output	n.a.	The number of scholarly outputs in the creative and performing arts, relative to the full-time equivalent (FTE) number of academic staff. This measure recognises outputs other than research publications and reflects all tangible research-based outputs such as musical compositions, designs, artefacts, software, et cetera.
Citation rate	n.a.	The average number of times that the university's research publications (over the period 2009-2012) get cited in other research, adjusted (normalized) at the global level to take into account differences in publication years and to allow for differences in citation customs across academic fields ('mean normalised citation rate', MNCS). Indicator of the scientific impact of research outputs within international scientific communities. The measure takes into account

		differences in citation customs across academic fields ('normalisation').
Top cited publications	n.a.	The proportion of the university's research publications that, compared to other publications in the same field and in the same year, belong to the top 10% most frequently cited. This is a measure of international research excellence. Departments with well over 10% of their publications in the top percentile of frequently cited articles worldwide are among the top research institutes worldwide.
Interdisciplinary publications	n.a.	The extent to which reference lists of publications reflect citations to publications from other scientific disciplines. The more a publication refers to publications belonging to different fields of science and the larger the distance between these fields, the higher the degree of interdisciplinarity. Given that the frontiers of research are often at the edge of disciplines, the multidisciplinarity of research reflects its innovative character.
Post-doc positions	n.a.	The number of post-doc positions relative to the number of academic staff. As post doc positions are often externally (and competitively) funded, an institution with more post-doc positions is more likely to have a higher research quality.
Income from private sources	n.a.	Research revenues and knowledge transfer revenues from private sources (incl. not-for profit organisations), excluding tuition fees. Measured in €1,000s using Purchasing Power Parities. Expressed per FTE academic staff. The degree to which research is funded by external, private organisations reflects aspects of its research quality - most notably its success in attracting funding and research contracts from end-user sources.
Co-publications with industrial partners	n.a.	The percentage of all the university's research publications that list an author affiliate with an address that refers to a business enterprise or a private sector R&D unit. The more research is carried out with external partners the more likely it is that knowledge transfer takes place between academia and business.
Patents awarded (size normalised)	n.a.	The number of patents assigned to (inventors working in) the university over the period 2002-2011 (per 1,000 students). The number of patents is an established measure of technology transfer as it indicates the degree to which discoveries and inventions made in academic institutions may be transferred to economic actors for further industrial / commercial development. Correcting for the size of the institution (approximated by student enrolments) enables a more fair comparison to other institutions.
Industry co-patents	n.a.	The percentage of the university's patent applications where at least one of the co-applicants is a private company. If the university applies for a patent with a private firm this reflects that it shares its knowledge with external partners and shows the extent to which it is willing to share its technological inventions for further commercial development.
Spin-offs	n.a.	The number of spin-offs (i.e. firms established on the basis of a formal knowledge transfer arrangement

		between the institution and the firm) recently created by the institution (per 1000 FTE academic staff). A new firm that is based on knowledge created in a university signals a successful case of knowledge transfer from academia to industry.
Publications cited in patents	n.a.	The percentage of the university's research publications that were mentioned in the reference list of at least one international patent (as included in the PATSTAT database). This indicator reflects the technological relevance of scientific research at the university, in the sense that it explicitly contributed, in some way, to the development of patented technologies.
Income from continuous professional development	n.a.	The percentage of the university's total revenues that is generated from activities delivering Continuous Professional Development (CPD) courses and training. When a university is very active in providing continuing education courses to companies and private individuals it transfers knowledge to its environment.
Foreign language bachelor programmes	n.a.	The percentage of bachelor programmes that are offered in a foreign language. Offering degree programmes in a foreign language signals the commitment of the university to welcome foreign students and to prepare its students for working in an international environment.
Foreign language master programmes	n.a.	The percentage of master's programmes that are offered in a foreign language. Offering masters programmes in a foreign language testifies the commitment of the university to welcome foreign students and to prepare its students for working in an international environment.
Student mobility	n.a.	A composite of international incoming exchange students, outgoing exchange students and students in international joint degree programmes. Having an international student body and offering students the opportunity to do part of their degree abroad signals the international orientation of the university.
International academic staff	n.a.	The percentage of academic staff (on a headcount basis) with foreign citizenship. Having an international academic staff reflects the international orientation of the university and its attractiveness as an employer for foreign academics.
International doctorate degrees	n.a.	The percentage of doctorate degrees that are awarded to international doctorate candidates. The number of doctorate degrees awarded to international candidates reflects the international orientation of an institution.
International joint publications	n.a.	The percentage of the university's research publications that list at least one affiliate author's address in another country. The number of international joint publications reflects the degree to which a university's research is connected to international networks.
Bachelor graduates working in the region	n.a.	The percentage of bachelor graduates who found their first job (after graduation) in the region where the university is located. If a relatively large number of an institution's graduates is working in the region this reflects strong linkages between the university and its regional partners.
Student internships in the region	n.a.	Out of all the university's students who did an internship, the percentage where the internship was with a company or organisation located in the region. Internships of

		students in regional enterprises are a means to build cooperations with regional partners and connect students to the local labour market.
Regional joint publications	n.a.	The percentage of the university's research publications that list at least one co-author with an affiliate address in the same region (within a distance of 50 km). Co-publications with authors located elsewhere in the institution's geographical region are a reflection of regional linkages between the university and regional partners.
Income from regional sources	n.a.	The proportion of income – apart from government or local authority core/recurrent grants – that comes from regional sources (i.e. industry, private organisations, charities). A high proportion of income from regional/local sources indicates a more intense relationship between the university and the region.
Master graduates working in the region	n.a.	The percentage of masters graduates who found their first job (after graduation) in the region where the university is located. If a relatively large number of an institution's graduates is working in the region this reflects strong linkages between the university and its regional partners.

DESCRIPTION OF RANKING – GUARDIAN UNIVERSITY LEAGUE TABLE 2015

Name of ranking organisation		**Guardian News and Media Limited**
Background of organisation		A private media company. The Guardian and Observer newspapers and the Guardian website are published by Guardian News & Media (GNM). GNM is the core business of Guardian Media Group (GMG), whose sole shareholder is the Scott Trust. Major activities of GMG are news, with a job portal and dating portal, advertising, masterclasses, online courses, bespoke training, separate UK, US, Australia Edition, and a specific education section.
Names of rankings offered by the ranking organisation	*Ranking 1*	University league table 2015 - the complete list
	Ranking 2	University league tables 2015 - by subject (a list of 53 subjects)
	Ranking 3	Specialist Institutions League Table
Award / rating / profiling		Nil
Ranking analysed in the present study		**University league table 2015 - the complete list**
Acronym		Guardian
Cycle of publication/update of results	*Annual*	Yes
	First year of publication	2008
Geographical scope	*Global*	No
	World regions	No
	National	Yes
Level of ranking/analysis	*Institutional level (comparing universities)*	Yes
	Disciplines (e.g. social sciences, engineering)	No
	Fields (e.g. history, physics)	Yes (but in separate subject rankings; can be searched by subjects)
	Programme (e.g. MBA)	Yes (can be searched by keywords of programmes)
Publicity means	*Part of a printed magazine/newspapers*	Yes
	Special publication	No
	Website (URL)	http://www.theguardian.com/education/ng-interactive/2014/jun/02/university-league-tables-2015-the-complete-list
	Others	No
Presentation of rankings	*Numbered*	Yes (displayed also ranking positions in the past year)
	Both readymade and user-created	No

	league tables	
	User-created league tables with clearly limited options	No, the complete table cannot be customised, but there are separate tables by subject and specialist institution type
	Starred /Badged	No, but an info icon on the left leading to the profiles of institutions. The profile include a photo, logo of the institution, brief intro of the institution, fees, bursaries, accommodation, facilities, transport, contact info of the institution, website.
	Active links to ranked universities	No
	Total number of universities considered	Not clearly stated
	Total number of universities ranked	116
	Individually ranked institutions up to position X	116
	Broadbanding from position Y onwards	No
	Published scores and sub-scores	Yes
Advertisement on the ranking website	*Education related ads*	No
	Non-education related ads	Yes
	Study / job portals	Job and dating portals
Events / consultancy		Masterclasses
Stated purpose of the rankings		"We've made huge changes to the Guardian University Guide this year, all aimed at helping students in the UK and abroad find the right university course for them at a UK university. This year's guide contains more information than ever before, and a handy course search to focus your choices. After all, if you are going to be paying fees of up to £9,000 a year, you want to be confident that you've picked a course you're going to love."
Is the methodology publicly available online?		Yes

INDICATOR, WEIGHT AND DEFINITION

Indicator	Weight	Definition
NSS – Teaching	10%	During the 2013 National Student Survey (NSS), final year first degree students were asked the extent to which they agreed with four positive statements regarding their experience of teaching in their department. The summary of responses to all four questions can either be expressed as a percentage who 'definitely agree' or 'mostly agree' or be expressed as an average score between 1 and 5 where 5 relates to students who 'definitely agree' and 1 relates to students who 'definitely disagree'. Such data are used to reflect the experience of teaching.
NSS – Assessment & Feedback	10%	Students were also asked for their perception of five statements regarding the way in which their efforts were assessed and how helpful any feedback was in NSS. Such data are used for this indicator.
NSS – Overall satisfaction	5%	Students also answer a single question which encompasses all aspects of their courses. Data relating to this question are processed for this indicator.
Value Added	15%	Based upon a sophisticated indexing methodology that tracks students from enrolment to graduation, qualifications upon entry are compared with the award that a student receives at the end of their studies. Each full time student is given a probability of achieving a 1st or 2:1, based on the qualifications that they enter with. If they manage to earn a good degree then they score points which reflect how difficult it was to do so (in fact, they score the reciprocal of the probability of getting a 1st or 2:1). Thus an institution that is adept at taking in students with low entry qualifications, which are generally more difficult to convert into a 1st or 2:1, will score highly in the value-added measure if the number of students getting a 1st or 2:1 exceeds expectations. At least 30 students must be in a subject for a meaningful Value Added score to be calculated using 2012/13 data alone. If there are more than 15 students in 2012/13 and the total number across 2011/12 and 2012/13 reaches 30, then a 2-year average is calculated. This option could only be exercised when the subjects were consistent in definition between the two years. Guardian regards students who are awarded an integrated masters as having a positive outcome. A variant of the Value Added score is used in the three medical subjects – Medicine, Dentistry and Veterinary Science. This is because medical degrees are often unclassified. For this reason, unclassified degrees in medical subjects are regarded as positive but the scope of the study population is broadened to encompass students who failed to complete their degree and who would count negatively in the Value Added score.
Student-staff Ratio	15%	SSRs compare the number of staff teaching a subject with the number of students studying it, to get a ratio where a low SSR is treated positively in the league tables. At least 28 students and 3 staff (both FTE) must

		be present in an SSR calculation using 2012/13 data alone. Smaller departments that had at least 7 student and 2 staff FTE in 2012/13, and at least 30 student FTE in total across 2011/12 and 2012/13, have a two-year average calculated. This option could only be exercised when the subjects were consistent in definition between the two years. Year-on-year inconsistency and extreme values at either end of the spectrum cause several SSRs to be suppressed or spread over two years.
Expenditure per Student	15%	The amount of money that an institution spends providing a subject (not including the costs of academic staff, since these are already counted in the SSR) is divided by the volume of students learning the subject to derive this measure. Added to this figure is the amount of money the institution has spent on Academic Services – which includes library & computing facilities – over the past two years, divided by the total volume of students enrolled at the university in those years.
Entry Scores	15%	Average Tariffs are determined by taking the total tariff points of 1st year 1st degree full time entrants who were aged under 20 at the start of their course, and subtracting the tariffs ascribed to Key Skills, Core Skills and to 'SQA intermediate 2'. There must be more than 7 students in any meaningful average and only students entering year 1 of a course (not a foundation year) with certain types of qualification are included.
Career Prospects	15%	The employability of graduates is assessed by looking at the proportion of graduates who find graduate-level employment, and/or study at an HE or Professional level, within 6 months of graduation. Graduates who report that they are unable to work are excluded from the study population, which must have at least 25 respondents in order to generate results.

DESCRIPTION OF RANKING - CHE UNIVERSITY RANKING

Name of ranking organisation		**CHE Centre for Higher Education in partnership with Die Zeit**
Background of organisation		The CHE is a think tank for higher education. Based on international comparisons, it develops models for the modernisation of higher education systems and institutions. These models are defined in close dialogue with decision makers from the higher education sector and politics. It also undertakes research on higher education and develops political scenarios. The activities aim at the realisation and testing of new models in terms of steering and controlling as well as organisational models.
Names of rankings offered by the ranking organisation	*Ranking 1*	CHE University Ranking (CHE-HochschulRanking)
	Ranking 2	CHE Research Ranking (CHE-ForschungsRanking)
	Ranking 3	CHE Excellence Ranking
Award / rating / profiling		CHE/dapm Employability Rating
Ranking analysed in the present study		CHE University Ranking (CHE-HochschulRanking)
Acronym		CHE Ranking
Cycle of publication/update of results	*Annual*	Yes
	First year of publication	1998
Geographical scope	*Global*	No
	World region	No
	National	Yes
	City	Yes (university towns)
Level of ranking/analysis	*Institutional level (comparing universities)*	Yes
	Disciplines (e.g. social sciences, engineering)	No
	Fields (e.g. history, physics)	Yes (Architecture, Bioengineering, Biology, Business Administration, Business Computing, Chemical Engineering, Chemistry, Civil Engineering, Commercial/Business Law, Computer science, Dentistry, Economic Sciences, Economics, Education Science, Electrical Engineering and Information Engineering, English/North American Studies, Environmental Engineering, Facility Management, Geography, Geoscience, German Language and Literature, History, Human Medicine, Industrial Engineering, Law, Material Engineering, Mathematics, Mechanical Engineering, Mechatronics, Media Science (Uni), Media- and Communicational Science (UoAS), Nursing Science, Pharmacy, Physical

		Technology, Physics, Political Science, Process Engineering, Psychology, Romance Studies, Social Policy and Social Work, Sports Sciences)
	Programme (e.g. MBA)	No
Publicity means	*Part of a printed magazine/ newspapers*	Yes
	Special publication	No
	Website (URL)	http://www.che-ranking.de/cms/?getObject=613; http://ranking.zeit.de/che2014/de/
	Others	Possible to install a ranking widget
Presentation of rankings	*Numbered*	No. HEIs are ordered alphabetically by default, optional order by ranking. Possible for users to check boxes and compare HEIs. Users can choose between graphic view and tabular view.
	Log-in required (online edition)	Yes, log-in required to rankings. Users must first register and create a profile before selecting a set of criteria for individualised ranking.
	User-created league tables with unlimited options	Yes, users need to first choose the indicators that they want the universities to be compared
	Starred /Badged	No
	Active links to ranked universities	No, but to a profile with detailed ranking data/scores, study options and basic facts about the institution, a map, and a link to the academic departments offering the subject ranked (not the institution)
	Total number of universities considered	Not stated clearly
	Total number of universities ranked	Not stated clearly
	Individually ranked institutions up to position X	N.A.
	Broadbanding from position Y onwards	HEIs grouped in colour dots
	Published scores and sub-scores	Yes, optional in addition to the dots
Advertisement on the ranking website	*Education related ads*	No
	Non-education related ads	Yes
	Study / job portals	Yes
Events / consultancy		Yes

Stated purpose of the rankings	"The CHE Universityranking, first published 1998, is the most comprehensive and detailed ranking of German higher education institutions. It includes 35 subjects and therefore serves more than three-quarters of all first-year higher education students. In addition to facts about study programmes, teaching, equipment, and research, the ranking also includes the assessments of 250,000 students on the study conditions at their HEI as well as an evaluation of the reputation of the departments by professors of the individual subjects. Since its launch, the CHE Universityranking has always provided fair, informative and qualified information for both the primary target group of first-year students, existing students, and for HEIs. All results are freely available on the Internet under Results (Ergebnisse des Hochschulrankings)."
Is the methodology publicly available online?	Yes, but little information about indicators is publicly available online in English.

INDICATOR, WEIGHT AND DEFINITION

Indicator	Weight	Definition
According to the ranker's website (http://www.che-ranking.de/cms/?getObject=617&getLang=en), the CHE acquires data about departments, HEIs and academic locations, and collects assessments by students and professors. This results in up to 30 ranked indicators per subject. The full list of indicators and their definitions is not available on the ranker's English website.		

DESCRIPTION OF RANKING – FINANCIAL TIMES GLOBAL MBA RANKING 2014

Name of ranking organisation		**The Financial Times Ltd.**
Background of organisation		The Financial Times Group is a division of Pearson PLC, which provides a broad range of business information, news and services. It includes the Financial Times, FT.com, a 50% shareholding in The Economist and a joint venture with Vedomosti in Russia. The group's companies include: the Financial Times, The Economist Group, Vedemosti. The FT Group is part of Pearson. Pearson's activities focused solely on education. Products of Financial Times are delivered via the FT newspaper, FT.com, mobile app, various business-to-business solutions and corporate licences.
Names of rankings offered by the ranking organisation	*Ranking 1*	European Business School Rankings 2014
	Ranking 2	Executive MBA Ranking 2014
	Ranking 3	Masters in Management
	Ranking 4	Masters in Finance Post-experience 2014
	Ranking 5	Masters in Finance Pre-experience 2014
	Ranking 6	Executive Education - Customised - 2014
	Ranking 7	Executive Education - Open - 2014
	Ranking 8	Online MBA Ranking 2014
	Ranking 9	Global MBA Ranking 2014
Award / rating / profiling		Nil
Ranking analysed in the present study		Global MBA Ranking 2014
Acronym		FT
Cycle of publication/update of results	*Annual*	Yes
	First year of publication	1999
Geographical scope	*Global*	Yes
	World regions	No
	National	No
Level of ranking/analysis	*Institutional level (comparing universities)*	Yes, but at 'business school' level.
	Disciplines (e.g. social sciences, engineering)	No
	Fields (e.g. history, physics)	No (only business studies)
	Programme (e.g. MBA)	Not directly from the ranking, but the profile of the schools ranked
Publicity means	*Part of a printed magazine/newspapers*	Yes
	Special publication	Yes
	Website (URL)	http://rankings.ft.com/businessschoolrankings/global-mba-ranking-2014

Presentation of rankings	*Others*	Data can be exported in excel, PDF, and generated table of up to 10 fields for external websites.
	Numbered	Yes (two columns, number of 2014 rankings, number of 3-year average rankings)
	Both readymade and user-created league tables	Yes
	User-created league tables with clearly limited options	Yes (users can add other additional information to be ranked: Aims achieved, Careers, Employment (%), Rank '13, Recommends, Research, Salary today ($), Value). The readymade rankings compare only Weighted Salary ($), Salary Increase (%). More fields (a total of 27) can be added. 3 yr. rank, Aims achieved, Audit year, Careers Country, Employment (%), Female board(%), Female faculty(%), Female students(%), Int. board(%), Int. course Int. faculty(%), Int. mobility, Int. students(%), Languages, PhD Faculty, PhD rank, Placements, Rank '12, Rank '13, Rank '14, Recommends, Research, Salary increase(%), Salary today($), Value, Weighted salary($). It is also possible to compare to previous "Global MBA Rankings". The additional information does not change the ranking orders of the 2014 rankings. Users can further select a few schools for comparison.
	Starred /Badged	Yes, optional "featured school". A featured school has a longer profile with charts, video, contact info of the school, course description, map etc.
	Active links to ranked universities	No, but to a profile of the school with detailed ranking data, alumni profile and contact information.
	Total number of universities considered	Not stated clearly
	Total number of universities ranked	100
	Individually ranked institutions up to position X	100th (tied ranks are common)
	Broadbanding from position Y onwards	No, but table notes to describe the clusters: "Although the headline ranking figures show the changes in the survey year to year, the pattern of clustering among the schools is also significant. A total of 195 points separate the top school from the school at number 100 in the ranking. The top 12 schools, from Harvard Business School to IMD, form the leading group of world-class business schools and are

		separated by 80 points. The second group is topped by IE Business School, which scored 60 points more than Nanyang Business School, leader of the third group. The fourth group, which includes schools ranked from 84th to 100th, is headed by McGill University: Desautels."
	Published scores and sub-scores	Yes
Advertisement on the ranking website	*Education related ads*	Yes
	Non-education related ads	No
	Study / job portals	No, but profiler (beta) for matching students' background and their needs with a school.
Events / consultancy		No
Stated purpose of the rankings		Not clearly stated, but appears to be aiding students in their choice of business schools worldwide.
Is the methodology publicly available online?		Yes

INDICATOR, WEIGHT AND DEFINITION

Indicator	Weight	Definition
Weighted salary	20%	This is the average alumnus salary three years after graduation, US$ PPP equivalent, with adjustment for variations between sectors.†
Salary increase	20%	This is the average difference in alumnus salary before the MBA to now. Half of this figure is calculated according to the absolute salary increase, and half according to the percentage increase relative to pre-MBA salary – the "salary percentage increase" figure published in the table.
Value for money	3%	This is calculated using salary today, course length, fees and other costs, including lost income during the MBA.
Career progress	3%	This is calculated according to changes in the level of seniority and the size of company alumni are working in now, compared with before their MBA.†
Aims achieved	3%	This is the extent to which alumni fulfilled their stated goals or reasons for doing an MBA.†
Placement success	2%	This is the effectiveness of the school careers service in supporting student recruitment, as rated by their alumni.†
Employed at three months	2%	This is the percentage of the most recent graduating class who had found employment or accepted a job offer within three months of completing their studies. The figure in brackets is the percentage of the class for which the school was able to provide employment data, and is used to calculate the school's final score in this category.
Alumni recommend	2%	This is calculated according to selection by alumni of three schools from which they would recruit MBA graduates.†
Female faculty	2%	This is the percentage of female faculty. For the three gender-related criteria, schools with a 50:50

		(male/female) composition receive the highest possible score.
Female students	2%	This is the percentage of female students on the full-time MBA.
Women board	1%	This is the percentage of female members on the school's advisory board.
International faculty	4%	This is calculated according to the diversity of faculty by citizenship and the percentage whose citizenship differs from their country of employment – the figure published in the table.
International students	4%	This is calculated according to the diversity of current MBA students by citizenship and the percentage whose citizenship differs from the country in which they study – the figure published in the table.
International board	2%	This is the percentage of the board whose citizenship differs from the country in which the school is based.
International mobility	6%	This is calculated according to whether alumni worked in different countries pre-MBA, on graduation and three years after graduation.
International course experience	3%	This is calculated according to whether the most recent graduating MBA class completed exchanges, research projects, study tours and company internships in countries other than where the school is based.
Languages	1%	This is the number of extra languages required on completion of the MBA.
Faculty with doctorates	5%	This is the percentage of full-time faculty with a doctoral degree.
FT doctoral rank	5%	This is calculated according to the number of doctoral graduates from each business school during the past three years. Extra points are awarded if these graduates took up faculty positions at one of the top 50 full-time MBA schools of 2013.
FT research rank	10%	This is calculated according to the number of articles published by each school's current full-time faculty members in 45 selected academic and practitioner journals between January 2011 and October 2013. The rank combines the absolute number of publications with the number weighted relative to the faculty's size.
† Includes data for the current year and the one or two preceding years where available		

DESCRIPTION OF RANKING – USNWR BEST COLLEGES RANKINGS (BEST NATIONAL UNIVERSITIES)

Name of ranking organisation		**U.S. News & World Report**
Brief description of organisation		A multi-platform, publisher of news and information, which includes www.usnews.com and www.rankingsandreviews.com, as well as the digital-only U.S. News Weekly magazine. U.S. News publishes annual print and e-book versions of its rankings of Best Colleges, Best Graduate Schools and Best Hospitals. In 2012 U.S. News launched a conference division focusing on important national conversations and solutions in STEM Education and Hospitals of Tomorrow. The company is privately owned by Mortimer B. Zuckerman, a real estate developer and publisher since 1984. The last print issue of U.S. News & World Report magazine was published in December 2010 completing the transition to digital. This move made it possible for the U.S. News brand of service journalism to explode with the introduction of several rankings products to benefit consumers while still maintaining the news and analysis content.
Names of rankings offered by the ranking organisation	*Ranking 1*	Best National Universities
	Ranking 2	Best Liberal Arts Colleges
	Ranking 3	Best Business Schools
	Ranking 4	Best Education Schools
	Ranking 5	Best Engineering Schools
	Ranking 6	Best Law Schools
	Ranking 7	Best Medical Schools
	Ranking 8	Best High Schools
	Ranking 9	Best Online Programs
	Ranking 10	Best Global Universities
	Ranking 11	Best Arab Region Universities
Award / rating / profiling		Nil
Ranking analysed in the present study		Best Colleges Rankings (National Universities)
Acronym		USNWR Best Colleges Rankings
Cycle of publication/update of results	*Annual*	Yes
	First year of publication	1983
Geographical scope	*Global*	No
	World regions	No
	National	Yes
Level of ranking/analysis	*Institutional level (comparing universities)*	Yes
	Disciplines (e.g. social sciences, engineering)	No. Separate rankings.
	Fields (e.g. history, physics)	No. Separate rankings.

	Programme (e.g. MBA)	No. Separate rankings.
Publicity means	*Part of a printed magazine/ newspapers*	Yes
	Special publication	Yes, USNWR Best Colleges Guide published in book form for sale.
	Website (URL)	http://www.usnews.com/info/features/about-usnews
	Others	Nil
Presentation of rankings	*Numbered*	Yes
	Both readymade and user-created league tables	Yes
	User-created league tables with clearly limited options	Yes, optional filters may be applied to sort by alphabetical order, tuition and fees, total enrolment, Fall 2013 acceptance rate, average freshmen retention rate, 6-year graduation rate.
	Log-in required (online edition)	Yes, for accessing full rankings, SAT/ACT scores, scholarship and grant information, graduation rates and other information.
	Starred /Badged	No
	Active links to ranked universities	No, but to a university profile with an online map, address of institution, quick stats and a link for online application via "College knowledge centre". Expanded profile of the university, financial aid statistics and GPA information is available at a cost through College Compass subscription (30USD/year).
	Total number of universities considered	Not stated clearly. 1,800 for all rankings including national, regional, liberal arts rankings.
	Total number of universities ranked	Not stated clearly, 1,365 for all the rankings above.
	Individually ranked institutions up to position X	Up to position 201th.
	Broadbanding from position Y onwards	No strictly defined broadbanding but tied ranks are very common.
	Published scores and sub-scores	Yes, but some are accessible only to subscribers.
Advertisement on the ranking website	*Education related ads*	Yes
	Non-education related ads	Yes
	Study / job portals	Yes (college application platform).
Events / consultancy		No
Stated purpose of the rankings		Not stated clearly.
Is the methodology publicly available online?		Yes

INDICATOR, WEIGHT AND DEFINITION

Indicator	Weight	Definition
Undergraduate academic reputation	22.5%	The U.S. News ranking formula gives significant weight to the opinions of those in a position to judge a school's undergraduate academic excellence. The academic peer assessment survey allows top academics – presidents, provosts and deans of admissions – to account for intangibles at peer institutions, such as faculty dedication to teaching. To get another set of important opinions on National Universities and National Liberal Arts Colleges, 2,152 counsellors at public high schools were surveyed. Each of these schools was a gold, silver or bronze medal winner in the U.S. News rankings of Best High Schools published in April 2013, as well as 400 college counsellors at the largest independent schools. The counsellors represent nearly every state and the District of Columbia.
Retention	22.5%	The higher the proportion of freshmen who return to campus for sophomore year and eventually graduate, the better a school is apt to be at offering the classes and services that students need to succeed. This measure has two components: six-year graduation rate (80 percent of the retention score) and freshman retention rate (20 percent). The graduation rate indicates the average proportion of a graduating class earning a degree in six years or less. Freshman classes that started from fall 2004 through fall 2007 were considered. Freshman retention indicates the average proportion of freshmen who entered the school in the fall of 2009 through fall 2012 and returned the following fall.
Faculty resources	20%	Research shows that the more satisfied students are about their contact with professors, the more they will learn and the more likely they are to graduate. Six factors from the 2013-2014 academic year were used to assess a school's commitment to instruction. Class size has two components: the proportion of classes with fewer than 20 students (30 percent of the faculty resources score) and the proportion with 50 or more students (10 percent of the score). Faculty salary (35 percent) is the average faculty pay, plus benefits, during the 2012-2013 and 2013-2014 academic years, adjusted for regional differences in the cost of living using indexes from the consulting firm Runzheimer International. The proportion of professors with the highest degree in their fields (15 percent), the student-faculty ratio (5 percent) and the proportion of faculty who are full time (5 percent) are also weighed.
Student selectivity	12.5%	A school's academic atmosphere is determined in part by the abilities and ambitions of the students. This measure has three components. USNWR factors in the admissions test scores for all enrolees who took the Critical Reading and Math portions of the SAT and the composite ACT score (65 percent of the selectivity score). It also considers the proportion of enrolled

		freshmen at National Universities and National Liberal Arts Colleges who graduated in the top 10 percent of their high school classes or the proportion of enrolled freshmen at Regional Universities and Regional Colleges who graduated in the top quarter of their classes (25 percent). The third component is the acceptance rate, or the ratio of students admitted to applicants (10 percent). The data are all for the fall 2013 entering class. While the ranking calculation takes account of both the SAT and ACT scores of all entering students, the ranking tables display the score range for whichever test was taken by most students
Financial resources	10%	Generous per-student spending indicates that a college can offer a wide variety of programs and services. U.S. News measures financial resources by using the average spending per student on instruction, research, student services and related educational expenditures in the 2012 and 2013 fiscal years. Spending on sports, dorms and hospitals doesn't count.
Graduation rate performance	7.5%	For the second year in a row, the graduation rate performance indicator has been used in all of the Best Colleges ranking categories. This indicator of added value shows the effect of the college's programs and policies on the graduation rate of students after controlling for spending and student characteristics, such as test scores and the proportion receiving Pell Grants. The difference between a school's six-year graduation rate for the class that entered in 2007 and the rate predicted for the class are measured. If the school's actual graduation rate for the 2007 entering class is higher than the rate U.S. News predicted for that same class, then the college is enhancing achievement, or overperforming. If a school's actual graduation rate is lower than the U.S. News prediction, then it is underperforming.
Alumni giving rate	5%	This reflects the average percentage of living alumni with bachelor's degrees who gave to their school during 2011-2012 and 2012-2013, which is an indirect measure of student satisfaction. To arrive at a school's rank, the weighted sum of its scores is first calculated. The final scores were rescaled so that the top school in each category received a value of 100, and the other schools' weighted scores were calculated as a proportion of that top score. Final scores were rounded to the nearest whole number and ranked in descending order. Schools that are tied appear in alphabetical order and are marked as tied on all ranking tables.

GLOBAL RANKINGS – RESEARCH/STAFF-RELATED INDICATORS AND WEIGHTINGS (EXTENDED)

	THE	QS	BGU	U-Multirank	ARWU	Leiden
Indicator (weighting)	Reputation survey (research excellence) (18%) – a university's reputation for research excellence based on an annual academic reputation survey of 'peers'.	Reputation survey (academics) (40%) – a university's academic reputation based on a global survey of 'experts' in the same field.	Global research reputation (12.5%) / Regional Research reputation (12.5%) – the aggregation of the most recent five years of results of Thomson Reuters' Academic Reputation Survey for the best universities in the world / region for research.	-	Alumni (10%) / Staff (at the time of winning) (20%) of an institution winning Nobel Prizes and Fields Medals – the total number of the prize winners. Different weights are set according to the periods of obtaining degrees.	Proportion of long (> 1 000 km) (n.a.) / short distance (< 100 km) collaborative publications (n.a.) – the proportion of the publications of a university with a geographical collaboration distance of more than 1000 km / less than 100 km.
Indicator (weighting)	Citations (30%) - the number of times a university's published work cited by scholars globally based on data supplied by Thomson Reuters (Web of Science); normalised by subjects.	Citation/faculty (20%) – the total citation count in relation to the number of academic faculty members at a university, based on the latest five complete years of data indexed by Scopus.	Normalised citation impact (10%) – the total number of citations per paper which is independent of the size or age of the university; normalised by research area, the publication year of the paper and publication type. Total citations (10%) – the multiplication of the publications ranking factor by the normalized citation impact factor; normalized by research area, publication year of the paper and publication type.	Citation rate (n.a.) – the average number of times that the university's research publications (2009-2012) get cited in other research, normalized by publication years and academic fields.		Mean normalized citation score) (n.a.) – the average number of citations of the publications of a university, normalized for field differences and publication year. An MNCS value of two for instance means that the publications of a university have been cited twice above world average. MCS (mean citation score) (n.a.) – the average number of citations of the publications of a university.

Indicator (weighting)			No. of publications among top 10% cited (12.5%) – the number of papers that have been assigned as being in the top 10 percent of the most highly cited papers in the world for their respective fields; dependent on the size of institution. % of publications among top 10% cited (10%) – the percentage of a university's total papers that are in the top 10 percent of the most highly cited papers in the world (per field and publication year); normalised to size of institution.	Top cited publications (n.a.) – the proportion of the university's research publications that, compared to other publications in the same field and in the same year, belong to the top 10% most frequently cited.	Highly cited researchers in 21 broad subject categories (20%) – the number of Highly Cited Researchers (2001 and 2014 lists) selected by Thomson Reuters.	Proportion of top 10% publications (n.a.) – the proportion of the publications of a university that, compared with other publications in the same field and in the same year, belong to the top 10% most frequently cited.

Indicator (weighting)	Publications/ academic staff (6%) – the number of papers published in the academic journals indexed by Thomson Reuters per academic, scaled for a university's total size and also normalised for subject.	-	Publications (12.5%) – the total number of scholarly papers that contain affiliations to a university and are published in the journals indexed by Thomson Reuters (2008 to 2012); not normalised by size of institution nor subjects.	Research publications (n.a.) – the number of research publications indexed in the Web of Science database, where at least one author is affiliated to the university; normalised by the size of the institution (student enrolments).	Research publications (20%) – the total number of papers (articles only) indexed in Science Citation Index-Expanded and Social Science Citation Index (SSCI) in 2013; a special weight of two was introduced for papers indexed in SSCI. Papers (articles only) published in Nature and Science (20%) – the number of papers published in Nature and Science between 2009 and 2013.	
Indicator (weighting)	International co-authored publications (2.5%) – the proportion of a university's total research journal publications that have at least one international co-author.	-	International collaboration (10%) – the proportion of the institution's total papers that contain international co-authors divided by the proportion of internationally co-authored papers for the country that the university is in.	International joint publications (n.a.) – the percentage of the university's research publications that list at least one affiliate author's address in another country.	-	Proportion of international collaborative publications (n.a.) – the proportion of the publications of a university that have been co-authored by two or more countries.
Indicator (weighting)	Ratio of international to domestic staff (2.5%)	International faculty ratio (5%) – the proportion of international faculty members in relation to overall number.		International academic staff (n.a.) – the percentage of academic staff (on a headcount basis) with foreign citizenship.		

Indicator (weighting)	Research income (6%) – university research income, scaled against staff numbers and normalised for purchasing-power parity. Institutional income/academic staff (2.25%) – institutional income scaled against academic staff numbers.	-		External research income (n.a.) – revenue for research that is not part of a core (or base) grant received from the government; measured in € 1 000s, using Purchasing Power Parities (PPP); expressed per full-time-equivalent academic staff.	Per capita academic performance of an institution (10%) – the weighted scores of the above five indicators divided by the number of full-time equivalent academic staff.	☐
Indicator (weighting)	-	-	-	Interdisciplinary publications (n.a.) – the extent to which reference lists of publications reflect citations to publications from other scientific disciplines.		Proportion of collaborative publications with industry (n.a.) – the proportion of the publications of a university that have been co-authored with one or more industrial partners. For more details, see University-Industry Research Connections 2013.
Indicator (weighting)	-	-	-	International doctorate degrees (n.a.) – the percentage of doctorate degrees that are awarded to international doctorate candidates.		Proportion of interinstitutional collaborative publications (n.a.) – the proportion of the publications of a university that have been co-authored with one or more other organizations.

Indicator (weighting)	-	-		Post-doc positions (n.a.) – the number of post-doc positions relative to the number of academic staff.		
				Art related output (n.a.) – the number of scholarly outputs in the creative and performing arts, relative to the full-time equivalent number of academic staff.		

BERLIN PRINCIPLES ON RANKING OF HIGHER EDUCATION INSTITUTIONS

Berlin Principles on Ranking of Higher Education Institutions

Rankings and league tables of higher education institutions (HEIs) and programs are a global phenomenon. They serve many purposes: they respond to demands from consumers for easily interpretable information on the standing of higher education institutions; they stimulate competition among them; they provide some of the rationale for allocation of funds; and they help differentiate among different types of institutions and different programs and disciplines. In addition, when correctly understood and interpreted, they contribute to the definition of "quality" of higher education institutions within a particular country, complementing the rigorous work conducted in the context of quality assessment and review performed by public and independent accrediting agencies. This is why rankings of HEIs have become part of the framework of national accountability and quality assurance processes, and why more nations are likely to see the development of rankings in the future. Given this trend, it is important that those producing rankings and league tables hold themselves accountable for quality in their own data collection, methodology, and dissemination.

In view of the above, the International Ranking Expert Group (IREG) was founded in 2004 by the UNESCO European Centre for Higher Education (UNESCO-CEPES) in Bucharest and the Institute for Higher Education Policy in Washington, DC. It is upon this initiative that IREG's second meeting (Berlin, 18 to 20 May, 2006) has been convened to consider a set of principles of quality and good practice in HEI rankings - **the Berlin Principles on Ranking of Higher Education Institutions**.

It is expected that this initiative has set a framework for the elaboration and dissemination of rankings - whether they are national, regional, or global in scope - that ultimately will lead to a system of continuous improvement and refinement of the methodologies used to conduct these rankings. Given the heterogeneity of methodologies of rankings, these principles for good ranking practice will be useful for the improvement and evaluation of ranking.

Rankings and league tables should:

A) Purposes and Goals of Rankings

1. *Be one of a number of diverse approaches to the assessment of higher education inputs, processes, and outputs*. Rankings can provide comparative information and improved understanding of higher education, but should not be the main method for assessing what higher education is and does. Rankings provide a market-based perspective that can complement the work of government, accrediting authorities, and independent review agencies.

2. *Be clear about their purpose and their target groups*. Rankings have to be designed with due regard to their purpose. Indicators designed to meet a particular objective or to inform one target group may not be adequate for different purposes or target groups.

3. *Recognize the diversity of institutions and take the different missions and goals of institutions into account*. Quality measures for research-oriented institutions, for example, are quite different from those that are appropriate for institutions that provide broad access to underserved communities. Institutions that are being ranked and the experts that inform the ranking process should be consulted often.

4. *Provide clarity about the range of information sources for rankings and the messages each source generates*. The relevance of ranking results depends on the audiences receiving the information and the sources of that information (such as databases, students, professors, employers). Good practice would be to combine the different perspectives provided by those sources in order to get a more complete view of each higher education institution included in the ranking.

5. *Specify the linguistic, cultural, economic, and historical contexts of the educational systems being ranked*. International rankings in particular should be aware of possible biases and be precise about their objective. Not all nations or systems share the same values and beliefs about what constitutes "quality" in tertiary institutions, and ranking systems should not be devised to force such comparisons.

B) Design and Weighting of Indicators

6. *Be transparent regarding the methodology used for creating the rankings*. The choice of methods used to prepare rankings should be clear and unambiguous. This transparency should include the calculation of indicators as well as the origin of data.

7. *Choose indicators according to their relevance and validity*. The choice of data should be grounded in recognition of the ability of each measure to represent quality and academic and institutional strengths, and not availability of data. Be clear about why measures were included and what they are meant to represent.

8. *Measure outcomes in preference to inputs whenever possible*. Data on inputs are relevant as they reflect the general condition of a given establishment and are more frequently available. Measures of outcomes provide a more accurate assessment of the standing and/or quality of a given institution or program, and compilers of rankings should ensure that an appropriate balance is achieved.

9. *Make the weights assigned to different indicators (if used) prominent and limit changes to them*. Changes in weights make it difficult for consumers to discern whether an institution's or program's status changed in the rankings due to an inherent difference or due to a methodological change.

C) Collection and Processing of Data

10. *Pay due attention to ethical standards and the good practice recommendations articulated in these Principles*. In order to assure the credibility of each ranking, those responsible for collecting and using data and undertaking on-site visits should be as objective and impartial as possible.

11. *Use audited and verifiable data whenever possible*. Such data have several advantages, including the fact that they have been accepted by institutions and that they are comparable and compatible across institutions.

12. *Include data that are collected with proper procedures for scientific data collection*. Data collected from an unrepresentative or skewed subset of students, faculty, or other parties may not accurately represent an institution or program and should be excluded.

13. *Apply measures of quality assurance to ranking processes themselves*. These processes should take note of the expertise that is being applied to evaluate institutions and use this knowledge to evaluate the ranking itself. Rankings should be learning systems continuously utilizing this expertise to develop methodology.

14. *Apply organizational measures that enhance the credibility of rankings*. These measures could include advisory or even supervisory bodies, preferably with some international participation.

D) Presentation of Ranking Results

15. *Provide consumers with a clear understanding of all of the factors used to develop a ranking, and offer them a choice in how rankings are displayed*. This way, the users of rankings would have a better understanding of the indicators that are used to rank institutions or programs. In addition, they should have some opportunity to make their own decisions about how these indicators should be weighted.

16. *Be compiled in a way that eliminates or reduces errors in original data, and be organized and published in a way that errors and faults can be corrected*. Institutions and the public should be informed about errors that have occurred.

Berlin, 20 May 2006

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