IMPROVING QUALITY IN EUROPEAN HIGHER EDUCATION:

AN ANALYSIS OF RESEARCH FIELD DEVELOPMENT, THE CURRENT STATE OF IMPLEMENTATION AND THE EMERGING CHALLENGES

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إلى والدي العزيزين انتصار وإياد...

إلى بلادي الغالية سوريا و فلسطين...

"Ensuring quality higher education is one of the most important things we can do for future generations..."

Ron Lewis

EXECUTIVE SUMMARY

The topic of quality in higher education (QHE) has received a lot of attention in recent years. Educational policy makers as well as higher education institutions (HEIs) around the globe are seeking to prepare their students for a rapidly changing labour market by increasing the quality of their study programmes alongside their education and research activities.

The purpose: How to improve quality in European higher education?. This thesis tries to answer this question from two directions. First, it investigates how quality has been implemented in European HEIs. This provides an assessment of the state of implementation of quality in different European countries and reveals challenges facing European HEIs towards the successful adoption of quality. Second, this thesis investigates the QHE research field by studying its development, the topics it addresses and the interrelation among them. This provides a road map of the field and highlights its emerging topics. Since the research literature is a fundamental reference for quality leaders, a clear understanding of the research field has positive implications for implementing quality and assisting quality leaders in identifying future strategies for QHE implementation. The thesis argues that the complementariness between the two directions is a vital aspect for quality improvement, whereby the thesis contributes to reduce the QHE complexity and overcome the challenges in the European Higher Education Area (EHEA).

Previous research: Quality in higher education is a challenging aspect for several researchers due to the ambiguity of its meaning and the complexity of the higher education environment. It has been described as a 'vague term', 'multi-dimensional concept', 'subjective' and 'reliant on perspectives of stakeholders'. This has several implications on implementation and research field. Several studies attempted to reduce its complexity. Some researchers focus on the meaning of QHE, while others offer a systematic literature review to identify the topics in the field, whereas other groups concentrate on recognizing trends of the research field. Unfortunately, there is a scarcity of research addressing the QHE research field and the relations among its topics. Therefore, this thesis addresses this gap by employing the bibliometric method to provide insights on the research field and conducting content analysis to map the QHE topics illustrating the relations among them.

Regarding the other direction, a number of studies consider investigating QHE implementation and its associated challenges. They are, however, limited in two main aspects. First, the vast majority narrowed down their scope to one or only few countries, although there is a need for

research to be implemented at the European level considering that such countries launched several steps towards assuring quality on the European level (including standards and guidelines, funding scheme, European QA organizations, and research projects). Second, most of these studies either focused on a particular stakeholder (e.g. student, academic staff, government or accreditation agency) or concentrated on a quality initiative (e.g. ISO, quality assurance (QA) or total quality management (TQM)). This thesis addresses the twofold gap by providing a comprehensive assessment of quality implementation on the European level and identifying the confronted challenges.

The research setting: This thesis comprises four articles. The first two articles investigates the research field. Article 1 explores the characteristics and features of the field and highlights its development over time. Article 2 shows the prominent topics in the field and the interlinking among them. The next two articles focus on the implementation of quality in European higher education and the associated challenges. Article 3 demonstrates the implementation of QA in over 20 European countries and provides a comparative analysis among the countries. Article 4 shows the challenges and barriers related to implementing quality in European HEIs from different experts' perspectives (i.e. European QA organizations, HEIs, accreditation agencies and educational research field).

The methodology: This thesis methodology relies on pragmatic worldview of mixed methods design. It combines qualitative, quantitative, bibliometrics and co-words analysis. These methods are employed in four different studies to commensurate the overall research objectives and questions. This research draws from more than two thousand QHE-publications used in both bibliometrics and co-word analysis. Moreover, it relies on 297 questionnaires collected from the European countries, in addition to 40 expert interviews from national and European level.

The results: The first two studies confirm that QHE is an evolving research field considering the increasing number of publications, journals, relevant authors and countries over time. Furthermore, this research field is composed of four main areas, namely, 'Education System', 'System Improvement', 'Supporting Environment' and 'Managing Quality'. Each of which includes several themes that are more likely to be connected with each other. Moreover, the research more heavily focuses on enhancing educational components (teaching, students and curricula) than quality initiatives, systems or models.

Concerning the quality implementation in Europe, the results show that HEIs rely on national standards or on self-designed model more than quality initiatives like ISO or TQM. Moreover, adopting quality in European HEIs is more noticeable in some areas than in others. For example, QA standards linked to teaching and learning activities along with developing curricula are much higher in comparison to organisational management or research areas. Additionally, QHE in Europe differs according to the country setting. Northern European countries, for example, have a better implementation setting compared to the others in our sample.

The results also identify several challenges in European HEIs. Experts mentioned challenges that related to both internal and external stakeholders. Such challenges are categorised into three groups, namely, organizational challenges, execution and leadership. The results confirm that many challenges are common across the countries with slight variations in some cases.

Contribution and implications: The thesis contributes to the QHE literature by (I) providing a holistic analysis to the research field and its features, (II) offering insights about the topics of QHE and the relations among them, (III) presenting a comprehensive assessment for implementing quality for many European countries, (IV) listing the internal and external challenges facing EHEA based on 40 experts' perspectives, (V) identifying the differences of QHE implementation and challenges among the countries through conducting a comparative analysis.

Furthermore, mapping the complete QHE literature contributes to improve our understanding of the QHE topics, and thereby, reducing the ambiguity and complexity of QHE. Exploring the prominent topics and the relations among them helps uncover the promising research directions, scholars' interests as well as further gaps and focus points. On theoretical level, the methodology conducted for illustrating the literature is newly employed in the field. Its originality is derived from using the publications' keywords as an alternative to the traditional use of 'citation' or 'full-text' analysis.

This thesis has implications for several stakeholders, among other are HEIs, policy-makers, national accreditation agencies and European QA organizations. The outcomes of the thesis, especially those related to the strengths and weaknesses of quality implementation on the national level and the recommendations provided by the experts, are important matters to be taken for consideration for successful quality practice at HEIs. The overall outcomes of the thesis and the comparative analysis amongst the countries are important for both policy-makers and the European

QA organizations as a better guide for boosting quality measures in EHEA. It can also be used for developing European QA standards and guidelines. Additionally, highlighting the challenges of implementing quality holistically could support accreditation agencies and national/European policy-makers to mitigate such barriers. This might be realized by a re-enactment of new rules and laws in the interest of overcoming the current challenges and promoting quality on national and European level.

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LIST OF ABBREVIATION

ASQ: American Society for Quality

E4: Group of ENQA, ESU, EUA, and EURASHE

EAPAA: European Association for Public Administration Accreditation

EFQM: European Foundation for Quality Management

EHEA: European Higher Education Area

ENQA: European Association for Quality Assurance in Higher Education

EQAA: European Quality Assurance Agency

EQAF: European Quality Assurance Forum

EQAR: European Quality Assurance Register

ESG: Standards and Guidelines for Quality Assurance in the European Higher Education Area

ESU: European Student Union

EU: European Union

EUA: European University Association

EURASHE: European Association of Institutions in Higher Education

HE: Higher Education

MBNQA: Malcolm Bald ridge National Quality Award

OECD: Organisation for Economic Co-operation and Development

QA: Quality Assurance

QFD: Quality Function Deployment

QHE: Quality in Higher Education

QM: Quality Management

QMS: Quality Management System

QS: Quality System

RQ: Research Question

SDG: Sustainable Development Goals

TQM: Total Quality Management

UN: United Nations

CHAPTER ONE:
EDITORIAL

1.1 INTRODUCTION

Quality in higher education (QHE) has become one of the major topics not only for educational institutions but also for governments and policy-makers on national and European level. This is evident from the growing attention for quality from governmental policies (Dakowska & Serrano-Velarde, 2018), European strategies (e.g. The Bologna Declaration, 1999), cross-national organisations' initiatives (e.g. OECD, 2012) and global agencies goals e.g. Sustainable Development Goals (SDG No. 4) of the United Nations (UN, 2018).

Education in general, and higher education in particular, are seen as key drivers that lead to greater economic growth and sustainable development (Jones *et al.*, 2010; Holmes, 2013; Owens, 2017). Therefore, this topic occupies the top priorities place of governments' agendas, and thus, the '*quality in higher education*' topic has become crucial and indispensable to boosting development.

According to Brookes & Becket (2007), several political, economic and socio-cultural forces drive countries to consider embedding quality in their educational system. Moreover, the great need for graduates -who are equipped with high-level of skills and knowledge- calls for quality improvement in higher education, especially, in such a rapidly changing and competitive labour market (European Commission, 2016).

Quality in higher education is a quite complex topic with several definitions, understanding, standards and models (Turner, 2011). Therefore, there is no unique or clear definition for QHE (Harvey & Green, 1993). However, it has been considered a multidimensional concept with different interpretations based on the perspective of its stakeholders (Schindler *et al.*, 2015). This has an implication on the complexity of the research field and its associated topics, particularly because QHE research field is multidisciplinary combining 'quality' from the industrial sector and 'higher education' environment.

In the European context, the compelling need for further development in the European higher education area started to be recognised. Hence, several steps toward promoting QHE in European countries have been taken into consideration. After the Bologna process in 1999, and more precisely, during the 'Berlin Communiqué' in 2003, several European countries agreed upon establishing national quality assurance systems as well as stimulating international networking and co-operation for further quality development purposes. A couple of years later, the European countries established the first version of ESG '*Standards and Guidelines for Quality Assurance in the European Higher Education Area*' in 2005. The major aim of ESG is to provide procedures and guidelines for Quality assurance system for improving quality on the European level.

After 10 years of practice, ESG had to improve their standards and guidelines to be tailored to European context and its complexity on the national and institutional level. However, there remains a set of challenges associated with implementing quality in the European higher education institutions (HEIs). Such challenges are not only related to the meaning of quality in the educational environment, but also associated with several factors including academic staff, students, study programmes, accreditation, and government legislation.

Therefore, the present thesis will address two indispensable aspects. The first one is related to the development of the QHE research area, whereas, the second one is associated with the practice of quality at the European HEIs and related challenges. The thesis will provide an illustration of the research field characteristics in addition to mapping to its topics. Then, it will explain in detail the status quo of implementing quality in European countries, and furthermore, reveal the related challenges confronting HEIs.

1.2 RESEARCH OBJECTIVES

The main focus of the present thesis is to provide a better and holistic understanding of quality in higher education for both theoretical literature and practices on the ground. These topics deserve more research attention not only because of the scant amount of research in this domain but also because of the actual needs demanded by HEIs that are facing a lot of challenges to adopting quality into their organizations.

Such topics are overlooked in the research due to fact that it requires a comprehensive approach which consumes much time and efforts to implement as well as masses of data from various sources (i.e. data extracted from thousands of publications, hundreds of surveys across European counties, and tens of experts' interviews). However, it offers a frame of references that serve as a basis for future research. Furthermore, it helps HEIs, education policy-makers, and QA organizations understand the status quo of education quality in Europe and its associated challenges aiming to improve quality on the institutional level.

The purpose of the present thesis is twofold. First, to explore the whole research field of quality in higher education attempting to establish the foundation for an overview picture of QHE. Hence, it investigates the characteristics of the research field and its development over time as well as clustering the main topics in the literature and the map of connections amongst them.

Second, to improve quality in European higher education institutions. Thus, it sheds light on the implementation of quality assurance in European higher education, through a comparison covering several European countries and showing how different country settings affect the implementation of QA standards. Furthermore, it is the aim of the study as well to examine the challenges associated with implementing quality in European HEIs on different levels (execution, leadership, and organization).

1.3 RESEARCH QUESTIONS

Surveying the relevant QHE literature through a comprehensive desktop study reveals a couple of key gaps and unanswered questions that still need to be investigated in term of theory and practice (discussed later in Chapter 2). However, this thesis will shed light and focus intensively on the following two points:

First, despite the amount of research in the field of quality in higher education and its complexity, there is a lack of clear and overarching research that focuses on the whole research field exploring the main features and themes, and more importantly, how these themes are connected to each other. Therefore, the present thesis will attempt to answer the following research questions in chapters 3 and 4:

RQ 1: To which extent has QHE research been evolving or devolving over time?
RQ 2: What are the main characteristics and features of the QHE research field?
RQ 3: What are the key topics addressed in the research field?
RQ 4: How are these topics interlinked to each other?

Secondly, since the Bologna Declaration in 1999, massive support for developing quality in European higher education is observed where a lot of projects, initiatives, workshops, and organisations have been established, and a lot of funding spent for the purpose of quality across European HEIs. However, research addressing quality implementation and its challenges among the European countries are rare as most of the studies are implemented on a national level rather than on cross-country level. In this context, chapter 5 and 6 will provide responses to the following questions:

RQ 5: What are the main characteristics of quality implementation in European HEIs?
RQ 6: How well have European HEIs implemented quality assurance standards?
RQ 7: What kinds of differences exist between countries in their implementation of the standards?

RQ 8: What are the major challenges associated with adopting quality in European higher education?

RQ 9: What are the main differences among the European countries in terms of quality challenges?

To demonstrate how the overall motivation for the thesis is translated to the aforementioned research questions, figure 1-1 illustrates the research gaps coupled with the related studies and its questions.

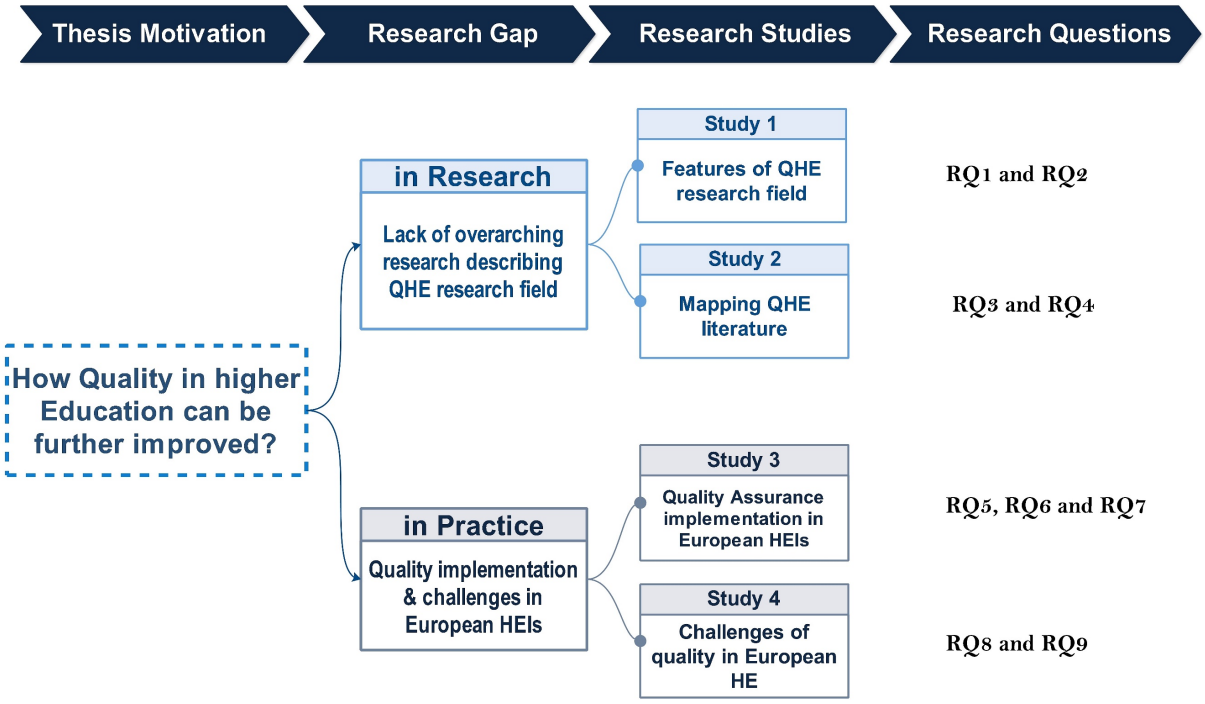

Figure 1- 1: The connection between the research's motivation and the research questions.

1.4 RESEARCH STRUCTURE

The structure of this thesis consists of four main parts and seven chapters as illustrated in figure 1-2. The first part of the thesis (Part A) comprises 2 chapters, namely Editorial and Theoretical Foundation. The editorial part includes the introductory part of the thesis including the research objectives, motivations, questions, structure, and the methodology followed in this thesis.

Chapter 2 includes the theoretical foundation for quality in higher education, where, a contextual descriptive for research development, model and initiatives will be provided.

Additionally, a general overview of quality in higher education topics and QHE in European context will be presented.

The second and third parts (B and C) contain a couple of studies that have been conducted during the doctoral project. These studies address the research questions of the thesis.

Part B contains two chapters aiming to assess the QHE research field. Chapter 3 offers a bibliometric description analysis for the whole research field of quality in higher education seeking to investigate the development of the research field. Chapter 4 discusses the research field but from a different point of view. It investigates the main topics of the research field and how such topics are intercorrelated with each other. This provides an overview picture of the research field that maps the entire literature together.

Part C, which includes chapter 5 and 6, is dedicated to the QHE implementation challenges across European countries. Therefore, chapter 5 offers the current status of implementing quality among the European countries. Whereas, chapter 6 reveals the main challenges associated with quality implementation.

The last section (part D) in the thesis discusses the findings and conclusions as well as the implications of the conducted studies. Moreover, it offers a detailed review of the theoretical and practical contribution to the overall thesis. The research implications and limitations of the present thesis will be discussed in the same chapter as well as the further research that is required in the area of the study.

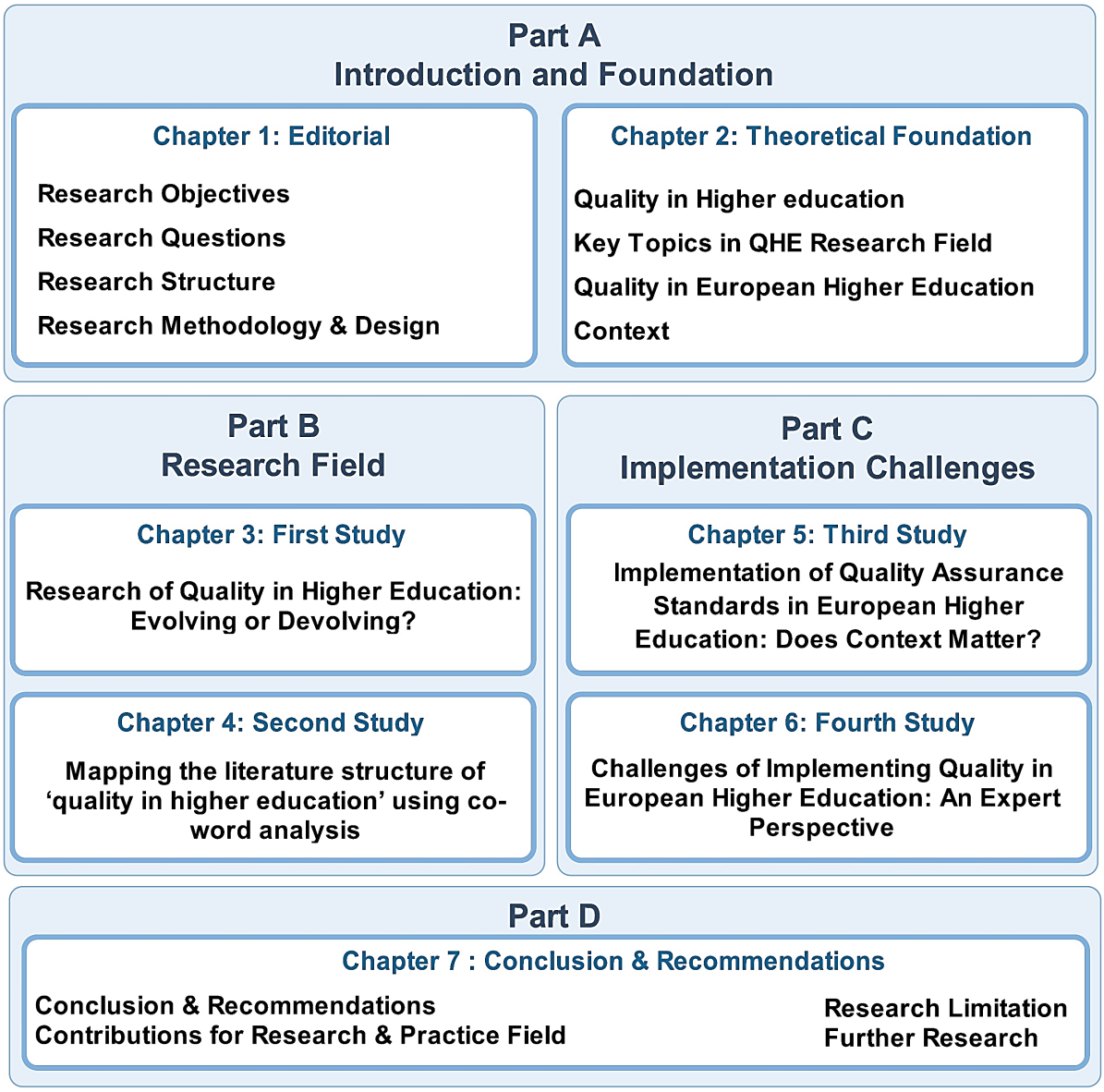

Figure 1- 2: Research Structure of the present thesis.

1.5 RESEARCH METHODOLOGY & DESIGN

Research can be distinguished in any field by two categories, empirical or non-empirical (cf. Dan, 2017). Empirical research typically depends on analysing observations and data in order to shape findings and conclusions. Whereas, non-empirical research generally focuses on concepts and theories. The scope of this thesis requires us to rely on the empirical paradigm giving the nature of the research objectives. Therefore, the four conducted studies in this thesis can be classified under the empirical studies category.

Within this classification, there are several research philosophies behind each study that related to the source, nature, and knowledge development (Bajpai, 2011). According to Slife & Williams (1995), philosophical ideas remain sometimes covered in the research context. Nevertheless, such philosophical ideas still impact the practice of research. Therefore, there are always needs to be explicitly recognized.

Explaining the philosophy behind each study in the present thesis will not only help in illustrating the general paradigm of the thesis and its associated studies but also will help in exploring the reasons of selecting each of research approach, methodology, strategy, time horizon, as well as technique and procedures (see Figure 1-3).

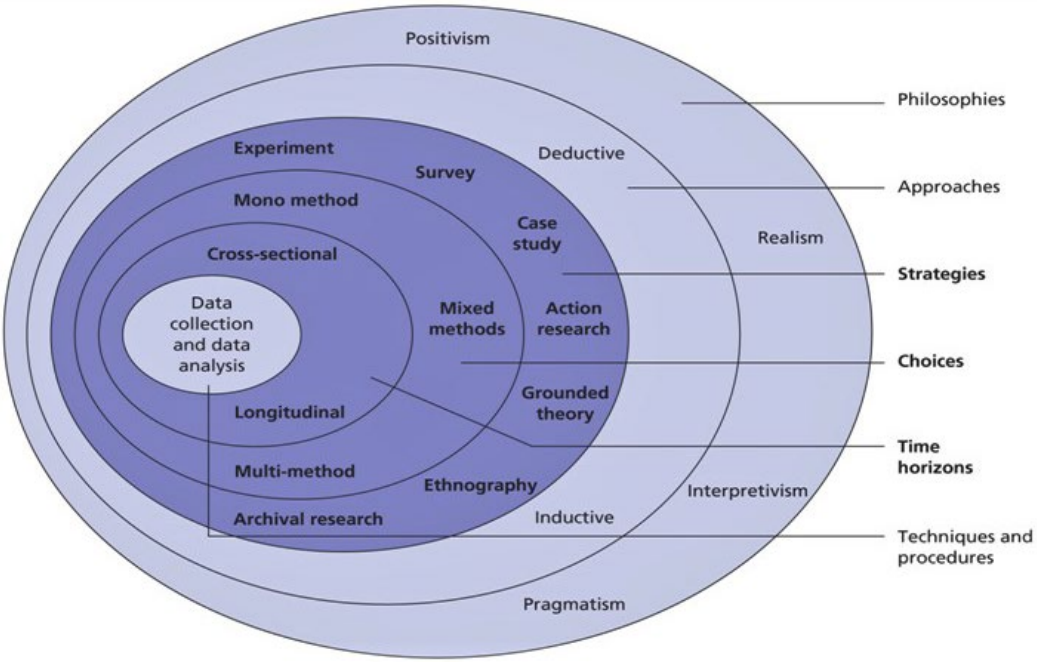

Figure 1- 3: Research Methodology. Source (Saunders *et al.*, 2009, p. 138).

According to Saunders *et al.* (2009), research philosophical worldview can be summarized into four categories, which are, positivism, interpretivism, realism, and pragmatism. These paradigms represent 'a cluster of beliefs and dictates' that influence the research process and its result's interpretation (Bryman, 2004, p. 694).

Positivists are usually concerned with testing a theory or founding evidence for a studied phenomenon. They pose this in terms of hypothesis or questions seeking for generalizable results. Furthermore, positivism assumptions hold true more for deductive reasoning approach of quantitative method. In contrast, interpretivism relies more on deepen understanding of a phenomenon or building a theory through analysing observations, than on predicting a relationship or verifying a theory. It holds true for the inductive approach of the qualitative method (Creswell, 2014; Bryman, 2016).

Furthermore, research design may also differ based on the type of inquiry, which can be distinguished into qualitative, quantitative, and mixed methods. Each of which has an explicit direction for procedures in the research execution which is called strategies of inquiry (Creswell, 2014). The quantitative design focuses on quantifying the collected data as an approach for analysis e.g. survey and experimental research. The qualitative design, however, emphasizes texts in data collection for the analysis scheme e.g. narrative research, case study, and interview research. Whereas, mixed methods research combines both qualitative and quantitative methods (cf. Bryman, 2004; Creswell, 2014).

Considering Saunders *et al.* (2009), table 1-1 classifies the thesis's articles in accordance with the research paradigm. Apart from the last study, the three remaining studies follow the positivist research tradition conducting the deductive approach by implementing quantitative analysis on primary data. However, a number of different analysis strategies and data collection methods are selected in compliance with each research design and its goals. Accordingly, bibliometrics, text analysis, co-word analysis, and survey are used as strategies for analysis in the first three studies in this thesis.

On the other hand, the fourth and last paper in this thesis is based on the interpretivist philosophy. It employs expert's interview as a strategy for qualitative analysis following the inductive reasoning approach.

Table 0-1: classification of the studies by research paradigm (Saunders *et al*., 2009).

Study	Philosophy	Approach	Method	Strategy	Time Horizon	Data Collection
Study 1 (Chapter 3)	Positivism	Deductive	Quantitative	Bibliometrics & text analysis	Cross-sectional	Publications (n =2858)
Study 2 (Chapter 4)	Positivism	Deductive	Quantitative	Co-word analysis	Cross-sectional	Publications (n=2289)
Study 3 (Chapter 5)	Positivism	Deductive	Quantitative	Survey	Cross-sectional	Questionnaires (n=297)
Study 4 (Chapter 6)	Interpretivism	Inductive	Qualitative	Expert interview	Cross-sectional	Interviews (n =40)

Overall, the methodology of the thesis relies on a pragmatic worldview of mixed methods design. It combines both interpretivism philosophy (coupled with inductive approach) and positivism philosophy (associated with deductive approach) together. This thesis is based on the assumption that collecting various kind of data delivers a more comprehensive understanding of the research dilemma than either quantitative or qualitative data alone. Therefore, the design of this thesis is based on a combination of several philosophy, approaches, strategies, methods, techniques, and procedures.

A number of studies addressed research patterns and trends associated with the research field of QHE in the context of methodological approaches (e.g. Manatos *et al.*, 2015; Prakash, 2018). Accordingly, the number of empirical studies is higher than studies of theoretical (conceptual) background. Further explanation illustrated by Tarí & Dick (2016) revealed that, former articles (the early 1990s) tend to have a preference for theoretical studies over empirical. However, empirical articles gradually increased afterwards (beginning of the 2000s). The authors further justify this trend (shift from theoretical to empirical studies) as a reflection of normal scientific paradigm for '*a field develops*' (2016, p. 285).

Further analysis in this regard revealed that within the empirical research, survey studies have dominated the field, whereas mixed methods approach and multiple case studies are relatively few (cf. Manatos *et al.*, 2015; Prakash, 2018).

As the aim of this thesis is twofold, it was incumbent on the author to rely on a multifaceted design that commensurates with the research questions and goals. Consequently, the design of this research, as illustrated in figure 1-4, is based on four empirical studies grouped in two main directions (parts B & C). Although more details associated with research design for each of the articles will be profoundly explained in its relevant chapter (3, 4, 5, and 6), an overview of the articles' methodologies and design will be provided in the following paragraphs:

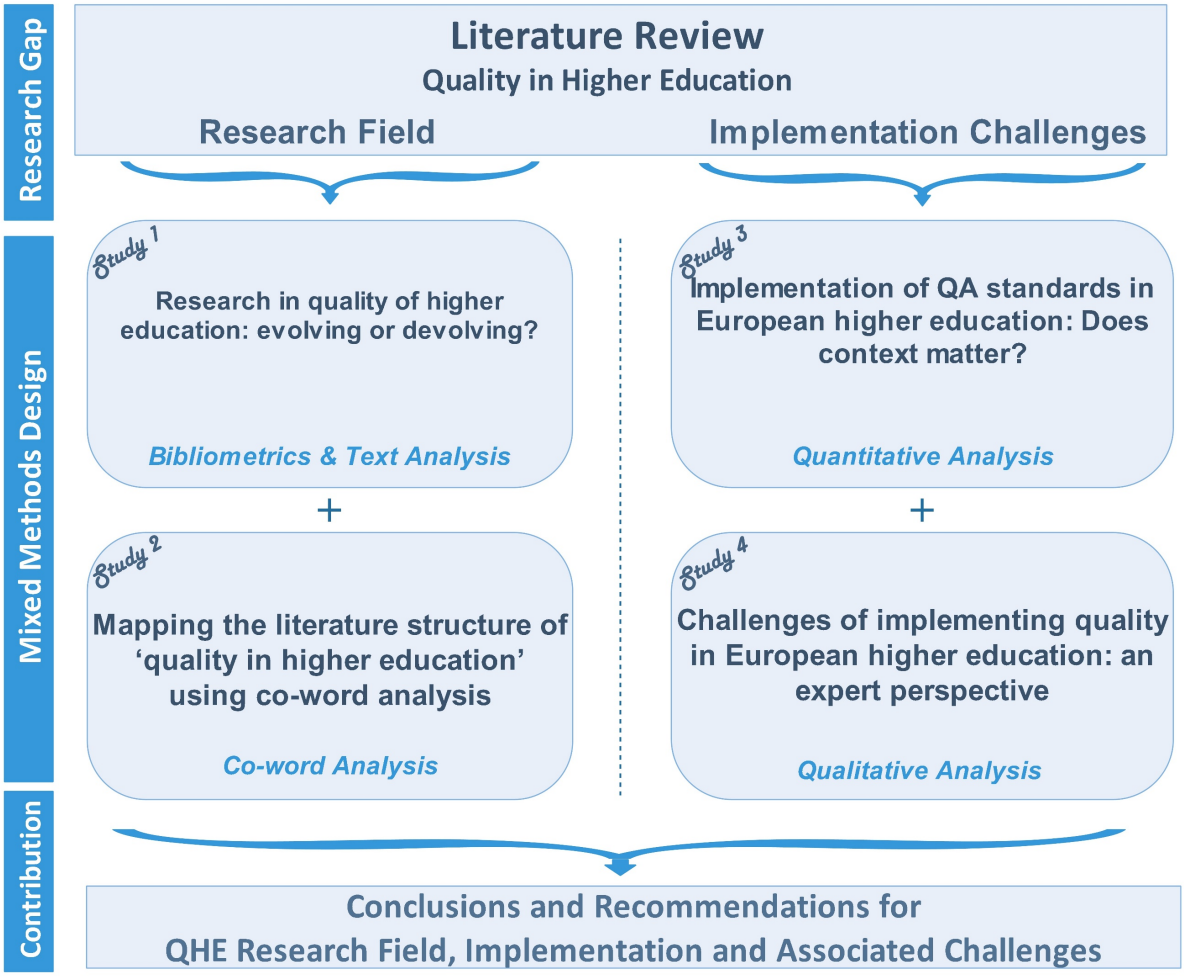

Figure 1- 4: Research design for the overall thesis.

The first study (***Chapter 3***) is based on twofold strategies. First, analysing the bibliometric data gathered from the QHE publications (n=2858) that extracted from SCOPUS academic database (e.g. number of articles, citation, authors, journals, and original countries) in order to provide descriptive analysis for academic literature over time. Second, text analysis strategy

for the articles' titles is employed aiming to explore the main addressed themes in the research field of quality in higher education.

The second study in this thesis (***chapter 4***) employed co-word analysis of *keywords* collected from QHE journals' articles over a long period of time. The aim of co-word analysis is to measure the correlation strength between words among several documents and illustrate the results into clusters. Co-word, traditionally, implemented in full-text analysis is implemented on keywords, as an alternative to traditional analysis, aiming to map the literature structure of the whole research field.

The third study in the present thesis (***chapter 5***) follows a quantitative analysis approach conducting a survey as a tool for the data collection process. The questionnaire aims to measure the implementation level of quality assurance across European higher education institutions. This questionnaire is developed based on the criteria of *Standards and Guidelines for Quality Assurance in the European Higher Education Area (**ESG 2015**).* This study offers a comparative analysis of QA in HEIs among several European countries.

The last study (chapter 6) relies on qualitative analysis of more than 40 experts' interviews coupled with comprehensive literature analysis. Moreover, the study employed 'triangulation of source' procedure to assure the reliability of the findings. The goals of this study are to identify the current challenges associated with quality implementation in European HEIs and ways to overcome such challenges.

CHAPTER TWO:

THEORETICAL FOUNDATION

2.1 QUALITY IN HIGHER EDUCATION

A couple of decades ago, Ball (1985) asked a question 'what the hell is quality?'. Tens of years passed and researchers are still arguing about what is the appropriate definition of quality and how it can be measured and achieved. Back to the time when quality started to expand to the educational sector, authors, like Astin (1980), perceived quality in different views, such as, (1) **mystical** concept where it cannot be defined or measured due to the complex environment, (2) **reputational** view where it takes into consideration people consensus about quality for a given institute, (3) **resources** view where the focus revolves around the educational activities inputs (e.g. students, facilities, facilities) that contribute to achieve the HEI mission, (4) **outcome** view where quality can be judged by an organization's products (e.g. graduates, publications, research funding), (5) **value-added** view where quality can be evaluated by the benefits brought to students.

A few years later, in the early 1990s, Harvey & Green (1993) explored quality in higher education from another point of view that considered quality as a relative concept to the involved people, processes, and outcomes of education organizations. Further explanation by them demonstrated that such conceptions see quality as (1) '**exceptional'** which refer to the point that quality is achieved when HEIs surpass implicit standards. (2) '**perfection or consistency**' which refer to doing things right from the first time with *zero defects* and *no faults*; the focus here is on the processes and how to meet such specification. (3) '**fitness of purpose**' stresses the effectiveness of quality toward the customers, and thus, it is measured against HEIs objectives and purposes. (4) '**value for money**' emphasises on the efficiency of work. Hence, it has been connected to accountability as a tool to be accomplished. (5) '**transformation**' where the focus is on the enhancement and improvement of the organization despite the difficulty of measuring quality against standards and benchmarks. This differentiation of how people might perceive quality led the authors to conclude that quality is

also a philosophical concept that holds different views and varies among several perspectives on society and individual level. Consequently, there is no unique definition for quality.

Cheong Cheng & Ming Tam (1997) summarized the variety of meanings of higher education quality in different models. These models are goal and specification, resource-input, processes, satisfaction, legitimacy, the absence of problem, and organizational learning model (1997, p. 24). Each of these models has a different focus, where one stresses standards and specifications, others shed the light on processes of learning as well as institutions' position and reputation. Some models concentrate on continuous improvement and absence of difficulties, where other different models give attention to resources and satisfaction of educational services and activities.

The recent definitions in the field are not far from the previous meanings. However, such a new understanding tends to focus on perspectives of internal and external stakeholders of HEIs (cf. Srikanthan & Dalrymple, 2007; Nicholson, 2011; Schindler *et al.*, 2015; Vettori, 2018). On the other hand, some authors recently attempt to define quality through observing existed concepts and patterns in the field

Bertolin (2015), as a case in point, provided five different concepts for quality from the perspective of a governmental and private sector, OECD, UNESCO, and EU. These are, (1) the **economist view** which focuses on aspects related to boost economic growth and educational efficiency, (2) the **pluralist view** which emphasizes democracy, socio-culture, and local specialities, (3) the **view of equity** which stresses the influence of social cohesion. Another investigation, conducted by Vettori (2018), presented five different patterns founded in the discourse of quality in higher education. These are, (1) **consumer protection** pattern where HEIs are considered as service provider, (2) **educative** pattern where quality help improvement-oriented change for organization development, (3) **entrepreneurial** pattern as

HEIs rival for students in competitive market and quality support in reducing cost and provide competitive advantages, (4) **managerial** pattern where quality shared values like effectiveness and productiveness help improving performance of HEIs, (5) **quality engineering** pattern as quality support measurement, operationalisation, and control.

Collectively, quality in higher education is a complex subject where 'there is no single correct definition of quality' (Harvey & Green, 1993, p. 28). This opinion, however, has been shared with many researchers who confirm that quality is not only hard to be defined but also subjective and rely on different stakeholders' perspectives (e.g. Martin & Stella, 2007; Westerheijden *et al.*, 2007; Cullen *et al.*, 2003; Brockerhoff *et al.*, 2015) where some people believe it can be 'measured', others think it can be 'operationalized', labour market focuses on 'employability', and social movement stresses 'equity' (Bertolin, 2015, p. 2419).

This issue has been like in the above-mentioned state for the last couple of decades and might last like this for the next years. Therefore, to shorten a 'multi-dimensional concept' like quality in a sentence-definition might generate either misleading view or general concept that cannot be successfully operationalized (Schindler *et al.*, 2015, p. 4). Consequently, in order to define quality at an educational institution, all stakeholders should be included aiming to integrate all needs and perspectives (Bertolin, 2015).

Overall, defining quality in higher education and having a clear unified understanding is a challenging dilemma especially in a complex environment like higher education (cf. Kauko, 2013; Cheng, 2016).

This complexity influences the implementation process of quality and makes it difficult to be achieved at educational institutions. Furthermore, it might affect the theoretical research field by increasing the ongoing debate concerning some aspects and raise questions that remain decisively unanswered. For instance, customers in higher education (cf. Quinn *et al.*, 2009),

stakeholders and their roles (cf. Ulewicz, 2017; Beerkens & Udam, 2017), quality effectiveness (cf. Seyfried & Pohlenz, 2018), quality indicators and measurements (cf. Morosini *et al.*, 2016), quality impact and applicability (cf. Koch, 2003; Becket, 2008).

2.2 KEY TOPICS IN 'QHE' RESEARCH FIELD

Early studies in the research field addressed generic themes. Such as topics related to definitions, importance, challenges, and benefit of quality in educational organizations. This because the whole concept of 'quality' established in another sector then started to spread out into the educational institutions. Then, this concept received extensive attention not only from governments and education leaders, but also from HEIs themselves. Therefore, researchers in this field were keen to discuss topics related to implementing and managing quality in order to facilitate the adoption of quality in the educational sector. Thus, topics associated with quality initiatives (QA, TQM, ISO, EFQM), quality systems, as well as models and dimensions have been addressed. Nowadays, as any other emerging research field, the topics discussed are more complex and overlap with other fields like higher education, leadership, technology, as well as business and economic sectors.

To demonstrate the topics existed in the research field of quality in higher education, the following paragraphs offer a clear illustration of the highlighted topics in this field. The aim of this step is to deepen our understanding of the research field as well as to demonstrate its important topics. This review will help determine the gap in the literature and provide the reasons behind the selected topics in this thesis.

Quality Management System refers to the procedure, process, and responsibilities for accomplishing quality objectives and policy (ASQ, 2017). It serves several purposes such as processes improvement, costs reduction, staff engagement, and setting organization-wide direction aiming to meet customer and regularity requirements. This topic is one of the early

topics that entered the higher education sector. A number of authors, on one hand, focused on topics related, for example, to the applicability of QMS in educational institutions (e.g. Mehralizadeh & Safaeemoghaddam, 2010), implementation of QMS (e.g. Rosa *et al.*, 2012; O'Mahony & Garavan, 2012), or setting up QMS in HE environment (e.g. Tannock, 1994). On the other hand, other scholars considered topics associated with different QMS models (e.g. Becket, 2008; Papanthymou & Darra, 2017) founded in HE field such as ISO-9000 series (e.g. Shutler & Crawford, 1998; Lundquist, 1997; Cheng *et al.*, 2004), or quality function deployment (QFD) in HEIs (e.g. Sahney *et al.*, 2007; Singh *et al.*, 2008; Wurjaningrum, 2008; Skordoulis *et al.*, 2015).

Total Quality Management has been seen in higher education as a philosophy that builds a learning organization with a customer-driven focus. It pushes for the continuous improvement of the organization's processes seeking to achieve total customer satisfaction (Corrigan, 1995). Authors, who studied this topic, demonstrate variety of themes which are related, for instance, to dimensions of TQM (Owlia & Aspinwall, 1996; Lagrosen *et al.*, 2004; Burli *et al.*, 2012), models and frameworks (Ho & Wearn, 1995; Venkatraman, 2007; Srikanthan & Dalrymple, 2010; Kay Michael *et al.*, 1997), as well as its implementation and further associated challenges (Mann & Kehoe, 1995; Taylor & Hill, 1992; Sullivan-Taylor & Wilson, 1996; Sirvanci, 2004). Although several researchers implied to the benefits and the needs of TQM, a number of authors considered it a controversial topic which, in the best case, has a limited impact on certain non-academic activities (Elmuti *et al.*, 1996; Harvey, 2006). Some authors, however, went further and mentioned that TQM has come and passed in HEIs (Koch, 2003).

Quality Assurance is defined by the international organization for standardization as a 'part of quality management focused on providing confidence that quality requirements will be fulfilled' (ISO 9000:2005, 2005, p. 9). However, it has been discussed and perceived in the

educational field from different points of view. Some scholars associated QA with education assessment (e.g. Grainger & Weir, 2013; Turri, 2013). Another group of scholars, however, recognized QA initiative as a method for enhancement and development (e.g. Campbell & Rozsnyai, 2002; Gvaramadze, 2008; Elassy, 2015; Williams, 2016) or as supportive tool for accreditation (e.g. Kohler, 2010; Dey, 2011). Others linked QA with the concept of '*accountability*' (e.g. Ellis & Loder, 1991; El-Khawas, 2006; Hoecht, 2006) or with the concept of 'reform' of higher education (e.g. Maassen *et al.*, 2011; Van Dao, 2014; Curaj *et al.*, 2015; Jarvis, 2017). On the other hand, a number of authors discussed a generic topics related to QA models and framework (e.g. Asif & Raouf, 2013; Boyle & Bowden, 1997; Jeliazkova & Westerheijden, 2002), challenges (Philipo Lonati & Ahn, 2014; e.g. Dill, 2010; Stella, 2006; Willborn & Gupta, 1984), and trends (e.g. Amaral & Rosa, 2010; AQA, 2009; Bollaert *et al.*, 2009; Bozo *et al.*, 2009).

Excellence has been defined as 'high level of perfection', 'quality of being outstanding', or 'being exceptionally good'. It is also could be the aspiration for institutions, academics and students to exceed the normal expectation (cf. Brusoni *et al.*, 2014). Authors, who published in this area, addressed topics related to the challenges, applicability, assessment, and implementation of excellence models in higher education institutions. These models are established and became well-known in the industrial sector, then, they have been adopted in the educational field. As a case in point, Cudney *et al.* (2014), Holmes *et al.* (2015), and Sunder & Antony (2018) addressed the Six Sigma practice and its implementation challenges in services setting like HE field; Dinu & Popescu (2015) and Hides *et al.* (2004) discussed topics related to the implementation of the European Foundation of Quality Management (EFQM) framework in HEIs as an approach for assessment and improvement. Ruben (2005) argued about the prize of Malcolm Baldrige as an integrated approach for assessment. The previous authors looked at the excellence model from a holistic point of view. Another group of

researchers, however, focused more on certain areas in the educational system addressing topics related to, for instance, teaching and learning (e.g. Brockerhoff *et al.*, 2014; Elton, 2006), students services and satisfaction (e.g. Matlay & Khan, 2009; Popli, 2005), management and leadership perspectives (Anyamele, 2007; Osseo-Asare *et al.*, 2005), as well as self-assessment model for educational institutions (e.g. Rosa & Amaral, 2007; Arjomandi *et al.*, 2009).

Accreditation is also one of the main topics that is deeply addressed in the QHE research field. According to Vlăsceanu *et al.* (2004), accreditation is a process of quality evaluation of educational institution to recognize whether a HEI meets pre-determined standards\ criteria or not. The most addressed titles in this area are topics related to accreditation types and its implementation. For example, accreditation processes and procedures (Abou-Zeid & Taha, 2014; Arakaki, 2015), accreditation rules and policies on national and international level (Bernardini & Ruffilli, 2006; Chmielecka & Dąbrowski, 2004; Kulkarni & Shindhe, 2013), accreditation agencies and external reviews (Serrano-Velarde, 2014; Suárez Arroyo *et al.*, 2012; Turri, 2014), institutional accreditation (Moscinska, 2014; Durrani, 2011), programme accreditation (Niemelä *et al.*, 2014; Hou, 2011; Lynch, 2015), as well as accreditation for engineering education (Pokholkov *et al.*, 2010; Augusti, 2009). On the other hand, a number of topics are linked to the accreditation have been discussed; such topics are associated with accreditation studies as it might be considered as a result for, improved by, or affected by the accreditation processes, among others are, quality assurance (Hendel & Lewis, 2005b; Dill *et al.*, 1996), Bologna processes (Adelman, 2009; Saarinen & Ala-Vähälä, 2008), quality evaluation & assessment (Van Vught & Westerheijden, 1994; Schwarz & Westerheijden, 2004; Lubinescu *et al.*, 2001), and accountability (Hendel & Lewis, 2005a; Suskie, 2015).

Quality of services is also one of the topics that have been widely discussed in the literature. Some authors addressed this topic by connecting service quality in higher education

with students satisfaction (Duarte *et al.*, 2012; Motefakker, 2016; Temizera & Turkyilmaz, 2012). Other scholars focused on how to assess and evaluate the quality of educational services and what are the instruments and tools for that (Abdullah, 2006; Brochado, 2009; Kashif *et al.*, 2016; Prugsamatz *et al.*, 2007). Several studies, however, studied the stakeholders' expectation and roles in service quality (Dužević & Čeh Časni, 2015; Joseph *et al.*, 2005; Joseph & Joseph, 1997). Researchers like Lodesso *et al.* (2014) and Sharabi (2013) turned their attention to argue about improvement and enhancement of service provided at educational institutions. Finally, a number of scholars investigated the model 'SERVQUAL'. It is a well-known model established in the industrial sector focusing on reliability, assurance, tangibles, empathy, and responsiveness dimensions. It aims to evaluate the expectation and perception of service quality at any organization (Yousapronpaiboon, 2014; Mostafa, 2006; Tan & Kek, 2004).

Quality of teaching and learning topics were addressed through discussing the means of developing and enhancing the learning and teaching processes and activities and how to increase their quality (Fry *et al.*, 2015; Ramsden, 1991; Ginns *et al.*, 2007). Other scholars focused on the relationship of the internal stakeholders (like students and academic staff) with improving quality and their impacts on maintaining quality in educational institutions (Cebrián *et al.*, 2015; Daud, 2012; Turk, 2010; Hill *et al.*, 2003). Furthermore, a number of recent studies went further and approached this topic from the perspective of the external stakeholders like government, accreditation and QA agencies (Amaral & Magalhães, 2002; Marshall, 2018; Savga *et al.*, 2018). Additionally, it has been also associated with other important topics related to designing and evolving curriculum and study programmes (Holm *et al.*, 2015; Smith, 2012; Windish *et al.*, 2009), building quality culture (Bendermacher *et al.*, 2017; Lycke & Tano, 2017; Yorke, 2000), and leadership (Black, 2015; Davies *et al.*, 2001; Nair *et al.*, 2010).

As a summary, quality in higher education is not only a complex multi-dimensional research field, but also an emerging research field that includes a diversity of topics that are connected

to each other. However, there is an obvious research need that addresses the whole research field and investigates topics, features, and the development of the research field, in addition, to explore how the topics in a complex research field are mapped and interlinked. Therefore, chapter 3 and 4 in this thesis focus on the entire research field seeking to illustrate statics and dynamic overview of the key areas there and its overtime development. This will contribute to improve our understanding of the QHE research field and might reduce the complexity of its topics.

2.3 QUALITY IN A EUROPEAN HIGHER EDUCATION CONTEXT

The concrete step toward developing the European higher education system and promoting quality assurance across the countries started when a group of 29 European countries established and issued in 1999 what is called '*Bologna Declaration*'. The main focus of this declaration is to harmonize the different systems of higher education among European countries and confront associated challenges (Kehm, 2010). Therefore, a number of steps have been approved, among others, adopting educational system that has comparable degrees amongst the countries which essentially based two cycles (under and postgraduate), establishing a credit system that facilitates students mobility, and promote European quality assurance co-operation (The Bologna Declaration, 1999).

A couple of years later, in 2003, a follow-up ministerial conference took a place in Berlin. The *Berlin Communiqué* further stressed the development of QA, establishing national quality assurance systems, as well as stimulating international co-operation and networking. Furthermore, Berlin Communiqué called for founding standards, procedures, and guidelines for European quality assurance. This conference has been considered as a fundamental paradigm shift where QA became one of the important topics on the agenda of the Bologna Declaration (Kecetep & Özkan, 2014).

Through the *Bergen Communiqué* in 2005, a guideline has approved and adopted by the ministerial communiqué announcing what so-called '*Standards and Guidelines for Quality Assurance in the European Higher Education Area*' (ESG). ESG has been prepared in cooperation with a number of European organizations that are concerned with quality i.e. ENQA, EUA, EURASHE, and ESU, which later came to be known as *E4 Group.*

Since 2005, a series of ministerial conferences have taken a place across Europe confronting many challenges facing HE systems in favour of developing and enhancing the progress of quality assurance as seeking to reform HE in the region. As a result, a number of communiqués (i.e. London, Leuven/ Louvain-la-Neuve, Budapest/Vienna, Bucharest, and Yerevan communiqué) have announced emphasizing on many objectives and steps to be considered (EHEA, 2017). Among others are:

- Recognition, student's mobility, qualification frameworks (national and overarching), lifelong learning, and social dimension, further QA collaboration and reformulating the value and vision (London communiqué, 2007).
- Student employability, international openness, student-centred learning, teaching mission of education, innovation in education and research, and multidimensional transparency tool (Leuven/Louvain-la-Neuve communiqué, 2009).
- Official launching of the European Higher Education Area (EHEA) as a unique framework for European higher education (Budapest/Vienna communiqué, 2010).
- Facing the economic crisis through QHE for more students, equipping students with employable skills, and increasing student mobility (Bucharest communiqué, 2012).

- Incorporate all stakeholders for implementing QA and agreed on structural reforms to meet new challenges, in addition to revised ESG to improve its applicability and its scope (Yerevan communiqué, 2015).

It is an obvious matter that quality in higher education is the focus of European countries attention. This is not only because of its ability to enhance teaching and learning but also because of its role in economic growth, global competitiveness, and cultural development (cf. Brookes & Becket, 2007; ESG, 2015). As a result, a number of projects, funding, research, initiatives, and QA associations have emerged in favour of supporting and developing QA movement on the European level.

However, QA is still considered as 'incomplete mission' of Bologna declaration (Kecetep & Özkan, 2014). Furthermore, HEIs still facing a lot of challenges, where inconsistent quality implementation is considered one of the foremost obstacles challenging the European higher education (Education International, 2017).

This might be due to the complexity of quality in higher education. Additionally, there are no systematic and well-organized efforts on the international level (Kecetep & Özkan, 2014). Undeniably, higher education is a national matter where no European authority could interfere in a national policy-making process for developing QA. Nevertheless, effective collaboration can successfully support the process of implementing quality in HEIs nationally and internationally (2014, p. 662).

Consequently, this also requires research to be conducted on the European level rather than on a national level. Although enormous scholars across Europe have investigated QHE in term of process and practice (cf. Harvey & Williams, 2010), the vast majority focused on national level (e.g. Rudder, 1994; El-Hage, 1997; Hoecht, 2006; Haapakorpi, 2011; Barandiaran-Galdos *et al.*, 2012; Suhonen, 2013; Rios, 2015). In this regard, Pratasavitskaya & Stensaker (2010)

further confirmed that most of the studies associated with managing quality in higher education are 'single case studies' and implemented on 'a small-scale operation' (2010, p. 48).

Therefore, one of the aims amongst others in the present thesis is to focus on quality in higher education across European countries. Accordingly, studies 3 and 4 of this thesis attempt to investigate QHE across the European countries and the associated implementation challenges facing their HEIs.

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CHAPTER THREE: THE FIRST STUDY

"RESEARCH IN QUALITY OF HIGHER EDUCATION: EVOLVING OR DEVOLVING?"

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Research in Quality of Higher Education: Evolving or Devolving?

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ABSTRACT

The topics of quality in higher education have received a lot of attention in recent years. Policy makers, as well as higher education institutions (HEIs) around the globe, are seeking to prepare their students for a rapidly changing labour market by increasing the quality of their study programmes. As a result, many researchers have addressed a variety of topics in the area of quality in higher education (QHE). Topics include the quality system, quality management, students' satisfaction, quality culture, developing curricula, quality of teaching and learning, and many more. Nevertheless, to date, relatively little is known about the research field itself.

The aim of this study is to provide a better understanding of the research field of QHE. To this end, in a first step, we provide an overview of the publications in the research field over the last 30 years. In a second step, we explore the main addressed themes as well as interrelations between them.

The methodology of this paper is based on analysing data collected from academic publications (journal articles, book chapters, conference papers, and reviews) in SCOPUS database. Two different methods are applied to provide different levels of analysis: a quantitative bibliometric analysis followed by a text analysis approach.

The findings of the study are twofold: first, it provides a descriptive analysis for academic literature over time. Second, it reveals the nine aggregated themes in the research field, which are: Management Systems, Improvement & Development, Teaching & Learning, Stakeholders, Quality Services, Excellence, Accreditation, Quality of Research, and General Themes of quality.

Keywords: Quality in Higher Education, Research Field Analysis, Text Analysis, Bibliometric Analysis, Quality Research Themes.

3.1 INTRODUCTION

The field of QHE is characterised by complexity in practice and theory (cf. Frazer, 1994; Holloway, 1995; Alzafari, 2017). Since the dispute over its raison d'être was cleared (Tarí & Dick, 2016), QHE has - among other drivers - been impacted by a combination of a changing geopolitical context, an increasing number of guidelines and competing standards, as well as a broadening range of stakeholders.

To start with the geopolitical context, over the past 30 years, the field of education has seen increasing competition for research, teaching, and funding (OECD, 2017). What started on a national level, quickly spread by way of alliances, exchange programmes, and league tables to international and cross-national levels (Harvey & Green, 1993; Feigenbaum, 1994; Vincent-Lancrin & Pfotenhauer, 2012; Hénard, 2010). To date, HEIs, governments and supranational bodies (such as the OECD) have moved Quality Management (QM) to the top of their agenda (Vincent-Lancrin *et al.*, 2015).

As a result, the existence of QM in higher education can now be seen from an increasing number of guidelines and competing standards: one example is the international acceptance of the Malcolm Bald ridge National Quality Award (MBNQA). This education-specific quality framework was originally established in the US in 1987, and has since then become widely accepted in other countries (Vesper & Gartner, 1997; Tarí & Dick, 2016). Yet, there is also evidence for cultural and even national and/or regional differences in how QHE is perceived and pursued (Schindler *et al.*, 2015, p. 9). This can be seen from the European initiative to establish an own set of Standards and guidelines for quality assurance in the European Higher Education Area (ESG). Introduced in 2005, ESG has been driving European QHE since then (ESG, 2015).

At the same time, there is a broadening range of stakeholders in QHE: Srikanthan & Dalrymple (2003, p. 127) name four groups of relevant parties when defining quality (funding bodies and the community as providers; students as users of products; employers as users of outputs; and academic staff and administration as employees of the sector). Only three years later, even six groups of actors have been identified in QHE across the OECD (governments, HEIs/providers, student representative bodies, quality assurance and accreditation agencies, internal academic accreditation facilities, and professional bodies) (Vincent-Lancrin *et al.*, 2015).

As a consequence of the drivers outlined above, QHE as a research field is characterised by the same complexity. The most symptomatic evidence is, that despite a multitude of drivers towards QHE, the field still agrees to disagree when it comes to defining quality (Ball, 1985; Harvey & Green, 1993; Schindler *et al.*, 2015). Scholars like Harvey and Green point out that, among other characteristics, the concept of quality itself is 'stakeholder-relative' (Harvey & Green, 1993, p. 28).

Given this complexity, Harvey and Green (1993, p. 29) call for a 'pragmatic attitude' when defining QHE. The present study follows such a pragmatic approach, and defines Quality in line with the Oxford Dictionary as 'the standard of something as measured against other things of a similar kind; the degree of excellence of something' (Oxford Dictionary, 2017). In addition, we refer to ESG for a working definition of QHE, where 'Quality [in higher education], whilst not easy to define, is mainly a result of the interaction between teachers, students and the institutional learning environment' (ESG, 2015, p. 53).

It is the objective of the following study to assess to what extent the research field of QHE has been evolving or devolving over time. To this end, we will reduce complexity by following

two steps of analysis: first, providing an overview of all academic publications over the last 30 years; second, identifying the main research themes.

3.2 METHODOLOGY

In line with the study's two objectives, our methodology combines two methods: first, we assess the features of the QHE research field by conducting a bibliometric analysis of publications extracted from SCOPUS database over the last 30 years. Second, we reveal the themes of the research field using text analysis approach.

By combining both bibliometrics and text analysis, we apply a powerful tool to assess whether or not the research field is evolving, and to find changes in research patterns over time.

Bibliometric methodology, on the one hand, is a statistical analysis for publications such as books, articles, conference proceedings, and other scientific inquiry papers (OECD, 2013). Ziegler (2009) mentions that bibliometric analysis is a tool for analysing academic publications associated with information like authors, citations, and affiliation, in order to describe the quantity and the focus of a research field. Studies apply the bibliometric approach for many purposes. For instance, the study by Adams (2009) uses bibliometrics to assess the quality of academic publications in UK higher education. Another study conducted by Shushan (2012) applies bibliometric methodology to assess the quality and quantity of academic productivity over time in order to forecast future trends. A last example is recent studies that use bibliometrics for trend analysis of a particular topic (Tsai, 2011, 2015).

Content analysis, on the other hand, is a widely used technique in qualitative research and employed for interpreting meanings extracted from textual data content (Hsieh & Shannon, 2005). In our study, we apply a text analysis approach to the publications' titles derived from our SCOPUS data collection, attempting to reveal the themes of the QHE research field.

Most importantly, our search strategy for retrieving the relevant publications and their bibliometrics information relies on using general terms (‘**Quality’** and ‘**Higher Education**’) exclusively for the three search fields (Title, Keywords, and Journal Name). This has the advantage of including all related terms without unintentionally neglecting any.

In a next step, we filtered the publications to ensure that only those related to QHE are included. Then, we manually added the information of the resulting 2,858 documents such as source type, source name, language, number of citations, years of publishing, number of authors, and country of origin to the dataset. In the last step, we conducted a double-check technique to control the dataset for, and cleanse it from, any typographical errors because even a misplaced space or a comma could lead to wrong results in the text analysis.

Our analysis consists of two levels. The first one provides a descriptive analysis of the research field features such as publication types, cited and uncited studies, authors, countries, the names of the top journals, and the number of publications over time.

The second level of analysis aims at classifying the publications into categories, which are grouped into themes. We obtain the following nine themes: Systems; Stakeholders; Improvement and Development; Excellency; Teaching & Learning; Services; Accreditation; and Quality of Research.

3.3 RESULTS

3.3.1 BIBLIOMETRICS ANALYSIS: FEATURES OF THE RESEARCH FIELD

The first level of analysis focuses on the bibliometrics, and, as can be seen in figure 3-1, half of all publications are journal articles, followed by conference papers (almost 30%). Only a small number of documents, 13%, are either books or books' chapters. The remainder is an insignificant share divided between reviews, letters, notes, and editorials (SCOPUS classification). The vast majority of the publications (95%) are written in English.

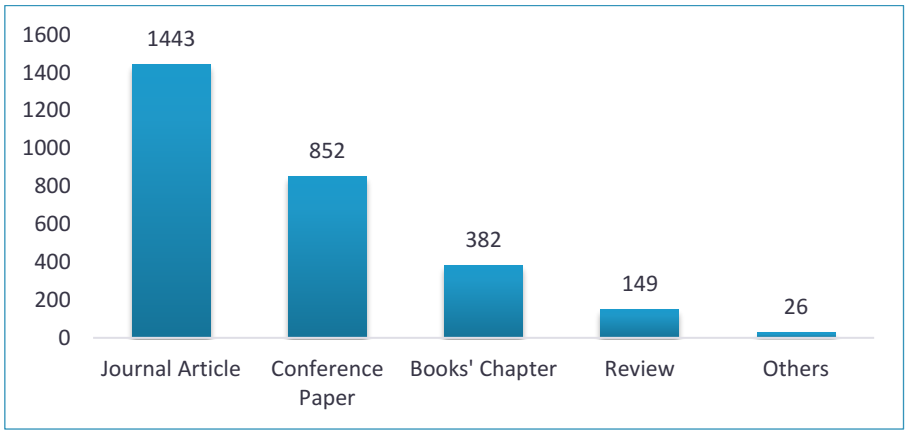

Figure 3- 1: Document Types in the QHE Research Field.

Our analysis finds that more than a hundred different countries contribute to publications in the field of QHE. Figure 3-2 shows that around 45% of all publications come from the top five publishing countries alone (United Kingdom, United States of America, China, Austria, and Spain). Furthermore, the figure illustrates that the leading 20 countries alone account for around three-quarters of research publications in the field.

Analysing the number of countries participating in shared research study shows that less than 10% of the publications were joint efforts between two or more countries. Instead, the vast majority of publications are a result of research undertaken by an individual country. Moreover, when it comes to authors' count, the percentage of publications with a single author is only around 38%, whereas 62% of publications in the field are multi-authored.

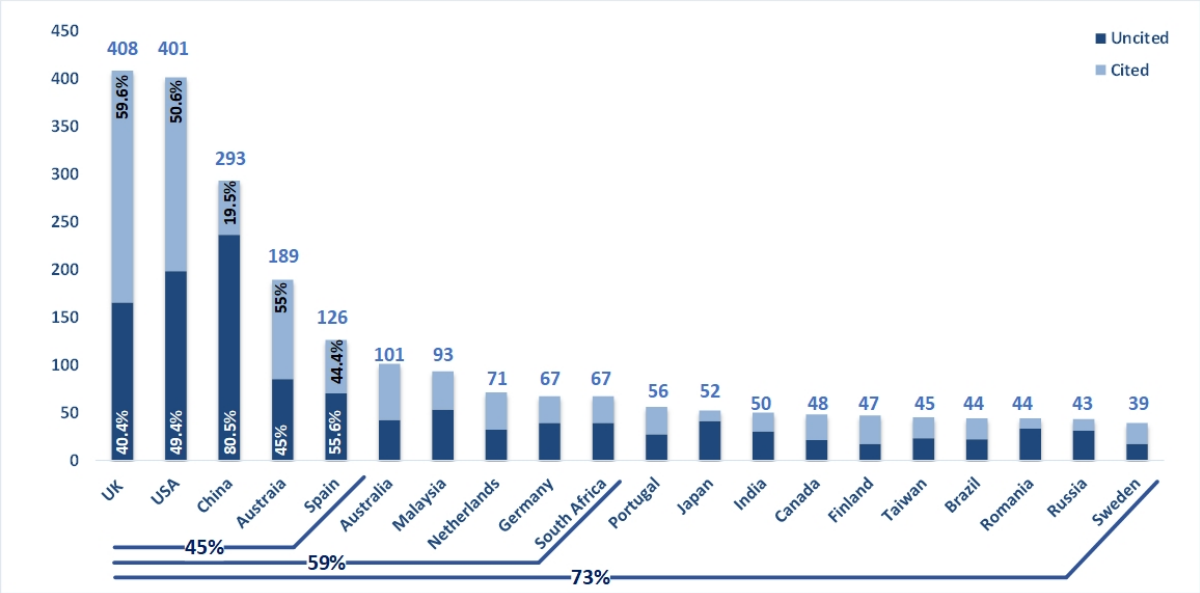

Figure 3- 2: Number of Publications per Country (Top 20 Countries).

Figure 3-3 shows a gradual increase in number of publications until 2004, followed by a sharp increase with a peak in 2011, after which publication numbers went down. Although research in this field was introduced long before 1985, it was not until the late 1990s and early 2000s that interest started to increase, as seen by the number of publications taking off. Although there is a sharp drop in overall publications between 2010 and 2015, the number of journal articles has been steadily increasing over the years. The reason behind the overall decline is the decrease in the number of books' chapters and conference articles over that period.

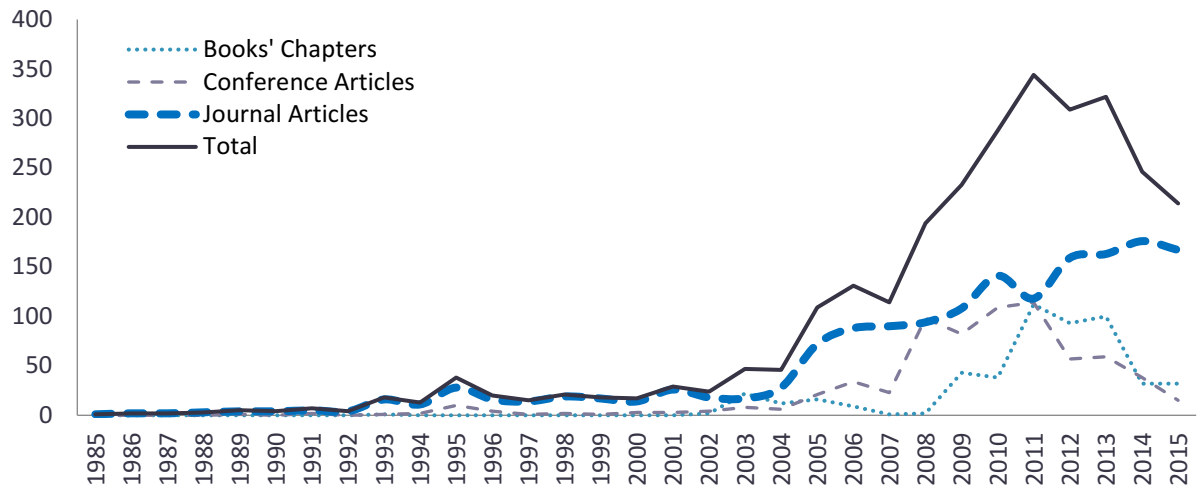

Figure 3- 3: Number of Publications in the QHE Research Field (1985-2015).

This study also analysed the citations of publications. Our results, however, show more than 55% (1,567) of the publications are uncited, while around 44% are cited publications (see figure. 3-4). This figure also conveys three periods. First, a period until 2004: this period is characterized by a small number of publications with an almost equal and relatively stable share of cited and uncited papers. Second, the time between 2004 and 2010, which saw a substantial increase in numbers for both shares. Third, the period after 2010, which is characterized by a sharp increase in uncited papers, accompanied by a dramatic drop in cited papers.

The interpretation of the figure requires closer examination. At first sight, one might assume that the research citation may have started to decrease in the last five years, leading to a sharp drop in studies cited as well as to a corresponding rise in studies not cited. However, when we investigated the different types of publications more closely, we found that the large majority of books (77.14%) and conference papers (84.26%) have not been cited. In contrast, 65% of the journal articles are cited (c.f. bar chart in figure 3-5). Moreover, this number is even 15% higher, if we exclude the last two years, accounting for a certain time lag between publishing and period to be cited.

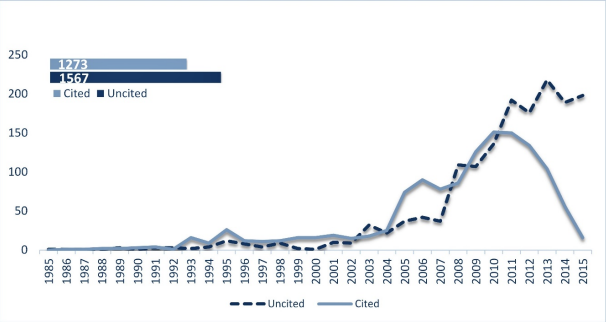

Figure 3- 4: Number of Publications Over Time.

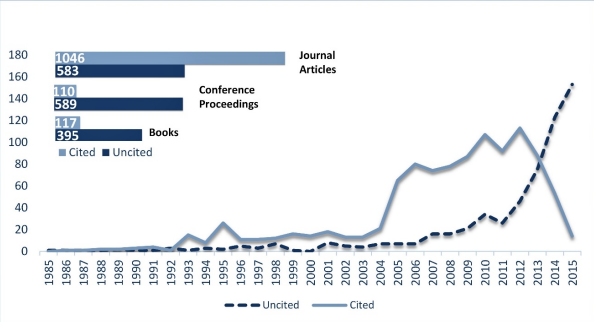

Figure 3- 5: Number of Journal Articles Over Time.

Finally, comparing the two figures (3-4 and 3-5) provides additional evidence that the main driver for the increase in uncited publications may again be the rise in book chapters and conference papers. It seems that scholars prefer to publish studies in academic journals more

often than other publication outlets and to cite journal articles more often than conference papers or books.

The results also shed further light on the citation analysis by country (cf. figure 3-2 again). It shows that the UK, USA, Austria, Australia, and the Netherlands have more cited publications than uncited ones such as China, Spain, Malaysia, Germany, or South Africa. By comparison, with a share of almost 60%, UK has the highest number of cited publications among countries. China, on the other hand, ranks third in overall publications, yet it has a strikingly low share of less than 20% of publications cited.

The findings also illustrate the number of journals publishing in the QHE research field. Figure 3-6 demonstrates that the number of journals in the research field has increased sharply after 2003. To date, over 530 journals located in different countries are contributing to the research field through publishing articles related to the area of QHE. The upper left bar chart in the figure gives a ranking of the top five countries by number of relevant journals that have in their scope topics associated with quality in education. These five countries alone (United Kingdom, America, Netherlands, Germany, and Spain) have around 350 relevant journals.

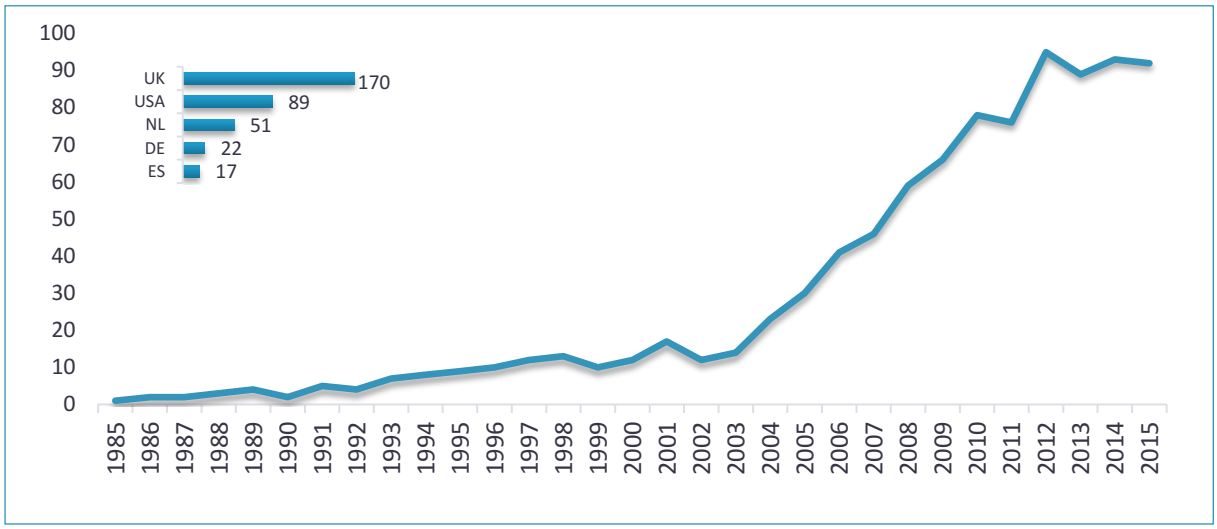

Figure 3- 6: Number of Relevant Journals Over Time / Top 5 Countries.

Table 3-1 ranks the top 10 academic journals by number of publications in the field. These journals alone account for more than 37% of all articles published in this research field. As the present study also looked at data on conference proceedings and books, articles from the top 10 journals represent around 21% of all publications collected.

Table 3- 1: Top 10 Journals Publishing in the Field of QHE.

Name of Journal*, Country	No. of articles
Quality in Higher Education, *UK*	223
Quality Assurance in Education, *UK*	189
Higher Education, *Netherlands*	54
Mediterranean Journal of Social Sciences, *Italy*	24
Total Quality Management and Business Excellence, *UK*	23
Assessment and Evaluation in Higher Education, *USA*	21
International Journal of Education Management, *UK*	21
Tertiary Education and Management, *UK*	21
Higher Education Policy, *UK*	20
Journal of Higher Education Policy and Management, *UK*	16
**** Total Number of Journals = 538.***	**(37.5%)**

3.3.2 TEXT ANALYSIS: THEMES OF QUALITY IN HIGHER EDUCATION

Employing a text analysis approach to the publications' titles yielded nine themes, which were grouped from over 30 categories (distinguished by capitalized first letter). The main themes and their composition, illustrated in figure 3-7, cover almost all aspects in the research field of QHE.

The first group is called '**General Themes**', and includes general topics related to quality and higher education. It ranks first among the nine themes identified. More than 22% of all the publications focus on general perception of quality in higher education. That means, authors address topics such as: Challenges and Barriers; Models and Approaches; Perspectives and Points of View; Policies and Strategies; Problems and Issues; Roles, Changes and Impacts; Experiences and Case Studies in the framework of higher education and quality.

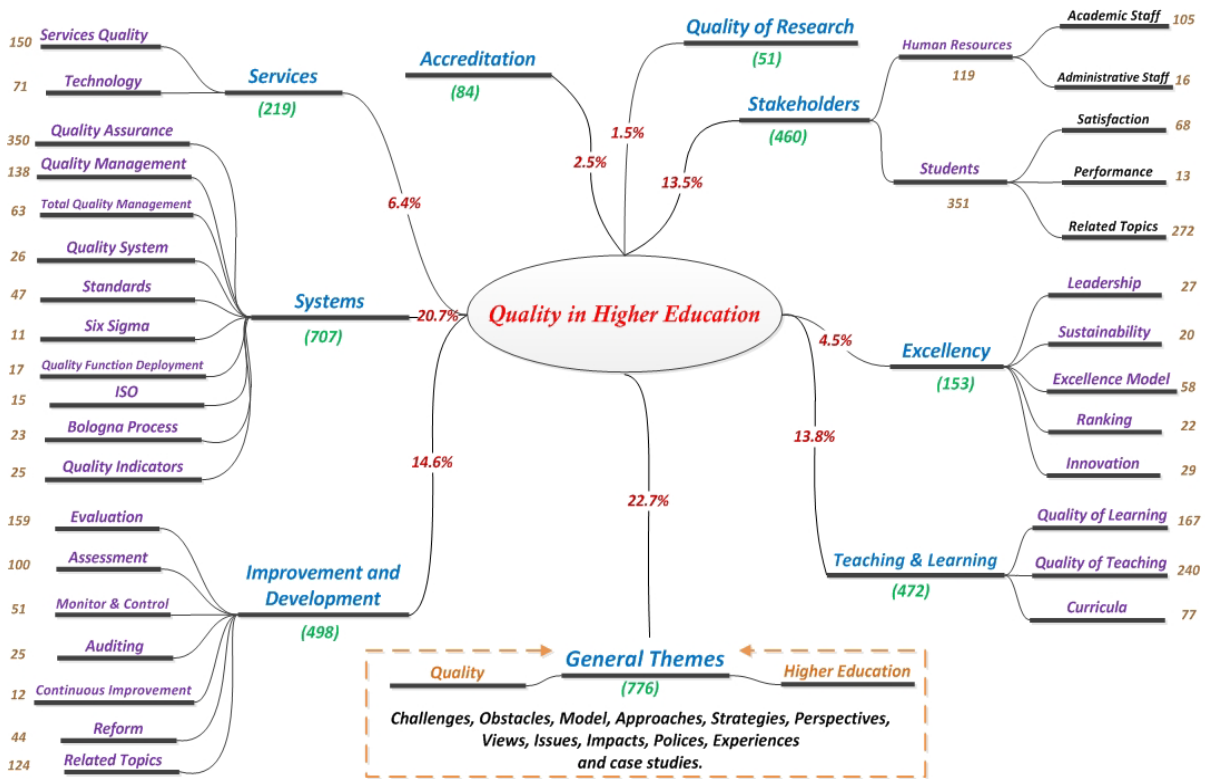

Figure 3- 7: Themes and Categories of the QHE Research Field.

The second theme, '**Systems**', includes topics related to quality systems or initiatives. This theme accounts for 20.7% of all publications. The most remarkable category within this theme is Quality Assurance (QA). 350 research papers address QA, representing almost 50% of publications in this theme. Furthermore, the research agenda of QA is characterized by a wide spread of topics, ranging from systems and models of QA, to the problems of and obstacles to it, as well as to policy developments and the implementation of QA in higher education. Some authors approach the topic from a general point of view, whereas others narrow the scope down to a specific case study.

In addition, the theme '**Systems**' covers initiatives such as Total Quality Management (TQM), Six Sigma, ISO, Quality Function Deployment (QFD), and Quality Management. The two initiatives covered most are QM (138 publications) and TQM (63 publications), followed by Quality Standards, Systems, and Indicators. In comparison, the least covered topics in this theme are ISO (15 publications) and Six Sigma (11 publications). Most of the topics assessed

in this category study how QM is implemented, evaluated, and could be improved. A few papers compare between quality management and other initiatives like ISO or Six Sigma.

Regarding TQM, it is of particular interest that most topics approach the general perspective of TQM in higher education, whereas other studies investigate TQM models and approaches. A small amount of studies covers the service quality in a TQM context.

Other topics listed in this theme are the Bologna process, standards, and indicators. Studies on the Bologna process do not have any particular direction in common. Some of the papers link the Bologna process with QA whereas other papers assess the impact of its implementation. The same applies in the case of standards and indicators topics where both have been explored from different perspectives and are based on different levels of classifications. Classifications used are local, national, or international standards; teaching and learning standards; tangible and intangible educational standards. One reason among others behind this might be that there are no worldwide standards or indicators for higher education. Instead, most HEIs seem to seek to develop their own individual standards or indicators.

The '**Improvement and Development'** theme constitutes about 14.7% (498) of all publications. It ranks third of all themes identified. This theme contains all topics related to Evaluation, Monitoring and Controlling, Continuous Improvement, Assessments, Auditing, Reforming, as well as any other topics related to development and improvement in higher education. The most frequent categories within this theme, after Related Topics, are Evaluation (159 publications) and Assessment (100 publications). Topics on Auditing and Continuous Improvement feature least.

The topics related to Evaluation are very diverse. Some discuss the general perspective of evaluation, e.g. evaluation of: systems, quality management, higher education, program, curricula, teaching, learning, or university. In contrast, others discuss the topic from a specific

point of view, such as the evaluation of: model, method, performance, or achievement. On the other hand, Assessment topics were somewhat limited to either quality assessment or general assessment of higher education. With regards to the Monitor & Control category, its 51 studies focus on controlling and monitoring of the following topics: quality in higher education, system, or process of teaching and learning. As to the Reform category topics, it seems that most of its topics are connected to three main issues, which are reform of quality, reform of higher education system, teaching reform.

Ranking fourth, the theme '**Teaching & Learning**' has 472 publications (13.8%). This theme includes around 240 papers addressing various topics related to quality of teaching such as: challenges, evaluation, assessment models, improving, and development. On the other hand, 176 publications addressed topics connected to the stream of learning quality. The topics of this category overlap with many other themes like Systems, Stakeholders, Improvement & Development, and Services. Additionally, this theme also covers 77 research papers focussing on designing study programs, developing curricula, and building learning outcomes.

The '**Stakeholders**' theme comprises 460 publications divided into two categories. The first one, called Human Resources, is related to both academic and administrative staff topics (119 publications). In contrast, the second one is related to students' topics like students' performance and students' satisfaction (351 publications). Interestingly, student-related topics are not only studied most - compared to other stakeholders within the theme -, but also represent the highest frequency overall.

The '**Services'** theme contains two categories related to Quality of Services and Technology. The first one includes 150 publications addressing topics like: quality service measurements, assessments, evaluations, dimensions, SERVQUAL methods, and satisfaction. The second category (71 publications) studies topics linked between quality and technology in

higher education, as well as topics addressing the importance and roles of educational technology.

The theme '**Excellency'** consists of five categories, which refer to Excellence Model, Innovation, Sustainable, Ranking, and Leadership. The largest amount of publications in the theme is Excellence Models topics with 58 publications. The topics in this category are addressing areas like: excellence awards and models, application and impacts, best practices and best strategies, and centre of excellence. Next come Innovation topics, which link innovation in higher education with development, evaluation, culture, curriculum model, and research. In the third place, Leadership topics (27 publications) study subjects like dimensions, perspective, or model of leadership; or connect the idea of leadership with topics like teaching, classroom, satisfaction, or quality management.

The last two themes with the lowest amount of publications are '**Accreditation'** and '**Quality of Research**' (2.5% and 1.5% respectively). The Accreditation category has 84 publications and covers different types of topics such as institutional and program accreditation, accreditation for regular/ online education, national and international accreditation, as well as topics related to standards, guideline, and self-assessment reports. The second category discusses aspects related to improving the research quality, developing policies and strategies to raise the research quality, conducting a better-quality research, and finding tools to assess and evaluate researches.

3.4 CONCLUSION

Although the QHE research field has existed for decades, the number of studies addressing the topic of this research field itself is little (e.g. Tight, 2012; Xia & Xiaotong, 2016), and existing studies are often limited to a specific area like QM, QA, or TQM (e.g. In'airat & Kassem, 2014; Tarí & Dick, 2016; Manatos *et al.*, 2017). The aim of this study was thus to fill parts of this

gap and to provide scholars with an overview of the QHE research field and its wide range of features as well as with a comprehensive list of QHE themes at a glance.

We also set out to assess the extent to which the research field of quality in higher education is evolving or devolving. Based on the findings presented in this paper, there are several indications in support of a continuously evolving research field. We find evidence for continued strong interest in QHE topics, given the high number of countries contributing to its publications, the increase of academic articles as well as the growing number of relevant journals. This is in line with Steinhardt *et al*. (2016), whose study provided empirical evidence that the related research field of quality assurance of teaching and learning is evolving, describing it as becoming a 'specialty', not a fading 'fashion' (Steinhardt *et al.*, 2016, p. 233).

As a consequence of continuous progress in QHE, we argue for QHE to be recognized as a separate research specialty, instead of considering it as an emerging area of either the 'Higher Education' or 'Quality' research field.

Recognizing a research specialty will drive further development as described by Morris and Van der Veer Martens (2008, p. 215), who mention in their work that any research speciality builds additional scientific knowledge over years in form of books, theses, conference papers, and journal articles. Therefore, recognition of QHE as a research specialty in its own right would facilitate further policy support, funding schemes, research projects and groups, international conferences, junior researchers, and maybe even dedicated study programs.

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CHAPTER FOUR: THE SECOND STUDY

"MAPPING THE LITERATURE STRUCTURE OF 'QUALITY IN HIGHER EDUCATION' USING CO-WORD ANALYSIS"

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Mapping the literature structure of 'quality in higher education' using co-word analysis

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ABSTRACT

Quality in higher education is an attractive and important field not only for higher education institutions but also for their stakeholders. However, the research field is very complex due to the overlapping and interlinking of its topics. Over the years, an enormous amount of studies has been devoted to exploring different topics.

Nevertheless, few studies focus on exploring the main topics and assessing whether these topics are interlinked. Therefore, there is merit in reducing the complexity of this field by mapping, clustering and visualising the structure of publications' topics.

The research methodology is based on implementing the co-word analysis of keywords extracted from more than two thousand academic publications seeking to reveal the prominent topics and the connections among them from a static and dynamic point of view. Mapping the literature structure of the research field reveals four key areas in the research field where each contains topics that are very likely to be interrelated to each other rather than to topics from other different areas.

Keywords: Quality; higher education; keywords analysis; co-word analysis; literature mapping; literature review; link analysis

4.1 INTRODUCTION

Quality in higher education has become an attractive and important topic worldwide. The growing need for quality in education has led to the topic heading the agenda at both governmental and academic levels. As a result, the number of studies in this complex multidisciplinary field is increasing dramatically.

The benefits gained by implementing quality in higher education are exceeding the aspirations of both educational institutions and students. This implementation will subsequently boost the economic and the political growth on the national and international levels. Brookes and Becket (2007, p. 6) revealed several drivers of educational quality, which they summarised into three broad categories: political, economic and socio-cultural. These drivers all push educational stakeholders towards establishing higher quality in education. In its higher education policy, the Education and Training office of the European Commission (2016) noted a strong need to improve higher education quality to increase the number of graduates with high-level skills and knowledge commensurate with rapidly changing labour market requirements.

It is now generally accepted that the research field of quality in higher education (which will be referred to as 'the research field' in this paper) is very complex, with a variety of theories, models, standards and indicators (Turner, 2011). Although quality is considered a rational concept, there is no clear and commonly accepted definition (Harvey & Green, 1993) because it is considered a multidimensional concept (Morosini *et al.*, 2016), dependent and subjective, and has many different interpretations according to the individual perspectives of different stakeholders (Schindler *et al.*, 2015; Eagle & Brennan, 2007).

Although a considerable body of research has addressed various topics of quality in higher education, there has been scant attention paid to providing a comprehensive overview of the

whole field that explores all topics and the relationships between them. Therefore, the intention of this study is to extend the area of investigation by attempting to respond to some crucial questions that remain unanswered. These questions are:

(1) What are the key topics addressed in the research literature?

(2) How are the topics in the research field connected to each other?

(3) What are the key areas within the research field?

This study is an application of co-word analysis based only on the keywords of peer-reviewed publications as an alternative to traditional full-text analysis. It attempts to cover all academic publications (journal articles, conference papers, and book chapters) in the field available in the SCOPUS database from a longitudinal perspective (1965-2015).

The value of this study, therefore, lies not only in highlighting the wealth of topics within the field but also in shedding light on how the research field is clustered, mapped and visualised. This research is also valuable at an applied level as a first attempt at conducting this type of analysis in the research area. Furthermore, it offers scholars a greater understanding of the current status of the research field.

The remainder of the paper is arranged into four main sections. The first section explains the methodology of the study, and the second section clarifies in detail how the preparation and analysis steps have been conducted. The third section describes the outcomes of the data analysis and discusses the interpretation of the results. The conclusion, further research and the limitations of the study are then reported in the final section.

4.2 METHODOLOGY

Co-word analysis is designed for measuring the correlation strength between words in different documents by visualising the results into groups or, more precisely, into clusters. Recently, this

methodology has been widely used in many fields of study. Although some studies have selected a large number of publications from various databases and journals (Rorissa & Yuan, 2012), other studies are limited to a small number of publications (Dutta *et al.*, 2008).

This methodology can either be applied over an extended period of time, such as the studies by Ronda-Pupo & Guerras Martín (2012) and De Bakker *et al.* (2005) where they collected relevant publications from recent decades, or over a short period of time, such as the five-year study by Sun *et al.* (2014). Likewise, some studies have selected multiple databases, whereas others have focused on a single database, as in the case of Dehdarirad *et al.* (2014). The traditional way of applying co-word analysis is by taking into consideration the full publication text. However, the analysis in this study uses the keywords, provided by the authors or journals (when available), of peer-reviewed publications extracted from the SCOPUS database over the years where data are available.

Co-word analysis depends on the presumption that keywords provide an appropriate description of the research content (Cambrosio *et al.*, 1993). In a similar vein, Menaka & Radha (2013) point out that keywords contain the most valuable information about the content of documents. According to the study by Ding *et al.* (2001), there are two ways to use words from publications for co-word analysis. The first is to use words extracted from a publication's title, abstract or the keywords offered by the authors or journals, as was done by Nobis & Wohlgemuth (2004). The second way is to use the words extracted from the full text using specialist software developed for this purpose, as was done by Janssens *et al.* (2006) and Coulter *et al.* (1998).

4.3 CO-WORD ANALYSIS STEPS

Co-word analysis consists of three main steps, which are collecting, preparing and analysing the publications' keywords (Figure 4-1).

4.3.1 FIRST STEP: DATA COLLECTION

The first step collects the keywords from academic publications. It starts by selecting the abstracts database, as well as the search query, to retrieve the relevant publications to extract the publication keywords of the field. The abstracts database and the search query were carefully chosen in order to provide optimal results. This study selected SCOPUS bibliometric database for collecting the publications' keywords as one of the largest databases for peer-reviewed literature (Harzing & Alakangas, 2016).

After trying several combinations of search queries, 'Quality AND Higher Education' was selected in the search bar of the title and journal name. However, any changes in the search query (selecting some keywords and ignoring others) could affect the resulting publications and lead to bias and misleading results

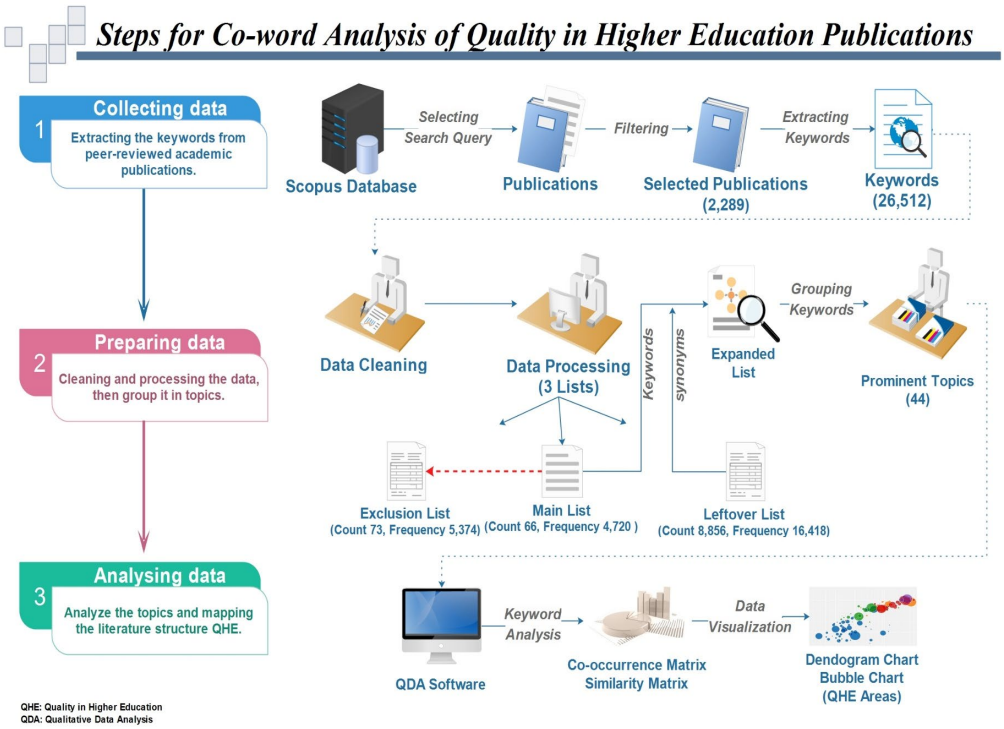

Figure 4- 1: The co-word analysis applied to the literature on quality in higher education.

Moreover, a double-check technique was applied to exclude irrelevant publications and to ensure that all remaining publications were relevant to the scope of the research. As a result, the total number of extracted keywords is 26,512 collected from 2289 publications.

4.3.2 SECOND STEP: DATA PREPARATION

Data preparation consists of four sub-steps: cleaning the publication keywords, processing, expanding the resulting data and grouping the keywords.

Data Cleaning: Misspelled keywords data was corrected. All symbols, punctuation marks, and definite/ indefinite articles were removed. All keywords' abbreviations were replaced with their full original form.

Data processing: The aim of the data processing is to select only the keywords with a high frequency and exclude the irrelevant ones. The keywords were aggregated into three different lists: the main list, the leftover list, and the exclusion list. The main list included only the keywords of high frequency (more than 19) after excluding some irrelevant keywords, aggregated in the exclusion list. These irrelevant keywords were excluded from the main list because they either refer to irrelevant topics like names of country, programme, institution, research method, or were used in the search query which will appear in every publication. All other keywords with a frequency of less than 20 were aggregated in the leftover list.

Data expansion: This stage is designed to expand the collected keywords in the main list by searching again in the leftover list for keywords similar to the ones stored in the main list. Keywords from the main list and their synonyms from the leftover list are grouped into the topics' codes organised into the prominent topics list.

Grouping into prominent topics: As is widely known, the keywords in a publication can be phrased in many different ways based on the author's viewpoint while still having the same or a similar meaning. Therefore, each keyword out of the 66 in the main list was searched for

again in the leftover list to seek keywords that have a similar meaning or can fit into the same category. Each group of similar keywords is aggregated in a different category called a prominent topic that represents one main topic collected from similar keywords. For example, all the following keywords belong to the prominent topic labelled 'Assurance': quality assurance, assuring quality, quality assurance framework and quality assurance in higher education. This step raised the frequency of the keywords from 4720 (17.8%) to 6792 (25.6%), and it sorted the 66 high-frequency keywords (Table 4-1) into 44 prominent topics (Table 4-2).

4.3.3 THIRD STEP: DATA ANALYSIS AND VISUALISATION

The final step is conducted through the analysis software to build the co-occurrence and similarity matrices among the prominent topics in order to cluster and visualise the results into a dendrogram and multidimensional scaling plots.

Co-word analysis is applied to build a matrix of keyword co-occurrence. The values in the matrix refer to the number of times both keywords appear together in the same publication. This means that the greater co-occurrence frequency between two words, the stronger the relationship is between them.

Through the software, a 44 × 44 matrix was created based on the number of prominent topics that resulted from the previous step. Each element in this triangular matrix expresses the frequency at which the two subjects appeared together in the same publication. Next, the co-occurrence matrix was converted into a similarity matrix. After that, the Jaccard coefficient transferred the matrix into an agglomeration similarity index list to be used as an input to illustrate the literature structure of quality in higher education.

Table 4- 1: List of the most frequent keywords in the field of quality in higher education research.

N	Keyword	Frequency	%	N	Keyword	Frequency	%
1	Quality assurance	487	10.32	35	Strategic planning	36	0.76
2	Student	454	9.62	36	Accountability	36	0.76
3	Teaching	357	7.56	37	Distance learning	36	0.76
4	Quality control	223	4.72	38	Quality enhancement	34	0.72
5	Curricula	218	4.62	39	Quality evaluation	33	0.70
6	E-learning	203	4.30	40	Academic staff	32	0.68
7	Quality management	169	3.58	41	Benchmarking	32	0.68
8	Accreditation	150	3.18	42	Quality management system	32	0.68
9	Total quality management	134	2.84	43	Curricula development	32	0.68
10	Service quality	106	2.25	44	Competition	31	0.66
11	Teaching quality	99	2.10	45	Employment	29	0.61
12	Evaluation	87	1.84	46	Leadership	29	0.61
13	Standard	76	1.61	47	Quality assurance system	28	0.59
14	Innovation	75	1.59	48	Higher education policy	27	0.57
15	Assessment	73	1.55	49	Continuous improvement	27	0.57
16	Personnel training	66	1.40	50	Economics	26	0.55
17	Quality improvement	63	1.33	51	Education system	26	0.55
18	Distance education	62	1.31	52	ISO	26	0.55
19	Quality assessment	62	1.31	53	Sustainable development	25	0.53
20	Customer satisfaction	61	1.29	54	Quality function deployment	25	0.53
21	Design	61	1.29	55	Quality standard	24	0.51
22	Bologna process	60	1.27	56	Online learning	24	0.51
23	Student satisfaction	53	1.12	57	Student learning	23	0.49
24	Learning	51	1.08	58	Learning outcome	22	0.47
25	Management	48	1.02	59	Vocational education	22	0.47
26	Higher education system	45	0.95	60	Professional development	22	0.47
27	Learning system	44	0.93	61	Quality culture	21	0.44
28	Quality of service	43	0.91	62	Educational technology	21	0.44
29	Teaching method	39	0.83	63	Planning	20	0.42
30	Servqual	39	0.83	64	Learning environments	20	0.42
31	Technology	38	0.81	65	Blended learning	20	0.42
32	Decision-making	38	0.81	66	Teaching evaluation	20	0.42
33	Satisfaction	38	0.81	Total		4720	100.0
34	Quality of teaching	37	0.78				

4.4 KEYWORDS USED IN THE LITERATURE

The total number of keywords extracted from the publications was 26,512, which is equal to 8996 distinct keywords (unique keywords that do not match any other keywords). After shifting (73) irrelevant keywords to the exclusion list, only 66 distinct keywords fulfilled the selection criteria for the analysis and remained in the main list. The total frequency of the 66 keywords in the main list was 4720, which is almost 17.8% of the total number of extracted keywords. The exclusion list of 73 occurred a total of 5374 times (20.3%) and the leftover list of 8857 words occurred a total of 16,418 times (61.9%).

The ten most frequent keywords in the publications are: quality assurance; student; teaching; quality control; curricula; e-learning; quality management; accreditation; total quality management; service quality.

Less frequent keywords include: student learning; learning outcome; vocational education; professional education; quality culture; educational technology; planning; learning environment; blended learning; teaching evaluation. The 66 keywords in the research area (Table 4-1) can be divided into two types. First, there are keywords that do not refer directly to specific topics in higher education quality, and they may be used quite often in other research fields. Such keywords include: design; technology; employment; competition; economics. Second, there are keywords that have a direct relevance to the research field, and they are mainly used in the field of quality. These keywords include quality assurance, quality of teaching and accreditation.

Table 4- 2: List of prominent topics for the field of quality in higher education research.

N	Prominent topic	Frequency	%	*N*	Prominent topic	Frequency	%
1	Teaching	755	11.12	24	Economics	85	1.25
2	Student	723	10.64	25	Quality improvement	67	0.99
3	Assurance	584	8.60	26	Strategy and planning	65	0.96
4	Curricula	386	5.68	27	Technology	65	0.96
5	Learning	373	5.49	28	Bologna process	62	0.91
6	Evaluation	277	4.08	29	Student satisfaction	56	0.82
7	E-learning	271	3.99	30	Continuous improvement	53	0.78
8	Quality control	228	3.36	31	Learning outcome	52	0.77
9	Quality management	222	3.27	32	Decision-making	51	0.75
10	Service quality	220	3.24	33	Management	48	0.71
11	Assessment	218	3.21	34	Sustainability	47	0.69
12	Accreditation	209	3.08	35	Enhancement	43	0.63
13	Training	191	2.81	36	Employment	37	0.54
14	Standard	175	2.58	37	Accountability	36	0.53
15	Innovation	150	2.21	38	Benchmarking	35	0.52
16	TQM	147	2.16	39	Quality culture	33	0.49
17	Distance learning	114	1.68	40	Online learning	32	0.47
18	Satisfaction	106	1.56	41	QFD	30	0.44
19	H.E. System	103	1.52	42	ISO	29	0.43
20	Policy	97	1.43	43	Leadership	29	0.43
21	Competition	91	1.34	44	Vocational education	24	0.35
22	Teacher	87	1.28	Total		6792	100.0
23	Design	86	1.27				

The frequency of the top ten keywords (2501) exceeds 50% of the total frequency of the main list keywords (4720). Thus, almost 10% of the total keyword frequency (26,512) in the whole research field can be ascribed to only ten keywords. This may lead us to conclude that the research field has a tendency towards a certain number of topics.

4.5 TOPICS ADDRESSED IN THE HIGHER EDUCATION QUALITY LITERATURE

Frequency and percentage of all prominent topics (will be distinguished from keywords by using angle brackets, that is < >) in the research field were calculated to demonstrate the top addressed topics in the literature (Table 4-2). The top ten prominent topics alone constitute 60% of all topics appearing in the reviewed literature, which clearly demonstrates some interesting findings. Moreover, by looking at the first five prominent topics, which are <Teaching>, <Student>, <Assurance>, <Curricula>, and <Learning>, it can be concluded that scholars in the field have a particular interest in the key elements of education, more than topics that related to managing the quality system like <Quality Management>, <Quality Control>, and <Quality Improvement>.

4.6 RELATIONSHIPS AMONG THE PROMINENT TOPICS

The prominent topics are arranged in groups based on their interrelationships and how likely they are to appear simultaneously in the same document (Figure 4-2). In other words, the topics are grouped based on the amount of research that addresses the same prominent topics together.

A dendrogram (also known as a tree graph) is a branching diagram where the horizontal axes consist of the grouped prominent topics and the vertical axes refer to the similarity index which represents the number of times that two topics appeared together in a publication. The chart presents the frequency of each subject, which may refer to the importance of the topic and, furthermore, arrange similar topics into related groups called clades.

The arrangement of the clades informs us which topics are close to each other. The length of the branch represents the value of the similarity index; the greater the length, the lower the value of the similarity index. Furthermore, the horizontal bar chart, located on the left side of the diagram, shows the frequency of the topics within its group.

Eight groups with varying numbers of prominent topics in addition to three isolated topics (shown in grey dotted line format in Figure 4-2) are indicated in the figure, which are <QFD>, <Teacher>, and <Enhancement>. Although they are remarkable topics in the field based on their quantity, the values of the correlation coefficients with other prominent topics are insignificant, which means, they show up, at least, twenty times in the research field but they have weak connections with other prominent topics.

The prominent topics in the first two groups are <Accountability> and <Policy> in addition to <Leadership> and <Management>, with a percentage of (1.96%) and (1.14%), respectively. Additionally, the bar chart in the same figure points out that <Policy> and <Management> have been addressed more than the topics <Accountability> and <Leadership>.

The third group is the largest one, in which many diverse topics are included, constituting 72.7% of all the topics. This group has 18 different prominent topics divided into two main branches. The first includes topics related to <Design> and <Online Learning>, whereas the second has two different sub-branches. The first sub-branch links <Accreditation>, <Assurance>, <Standards>, <Bologna Process>, and <H.E. System> together, whereas the second sub-branch includes two parts; the first includes only <Innovation> and <Training>, whereas the second has two sub-parts that include <Assessment>,<Evaluation>, and <Quality Control> in one and <Curricula>, <Student>, <Teaching>, <Distance Learning>, <E-learning>, and <Learning> in the other. The bar chart in the figure shows the three most frequent topics in the group, which are <Teaching>, <Student>, and <Assurance>, with a

frequency of 755, 723 and 584, respectively. In addition, there are the less frequent topics <Distance Learning>, <Bologna Process> and <Online Learning>, with a frequency of 114, 62, and 32.

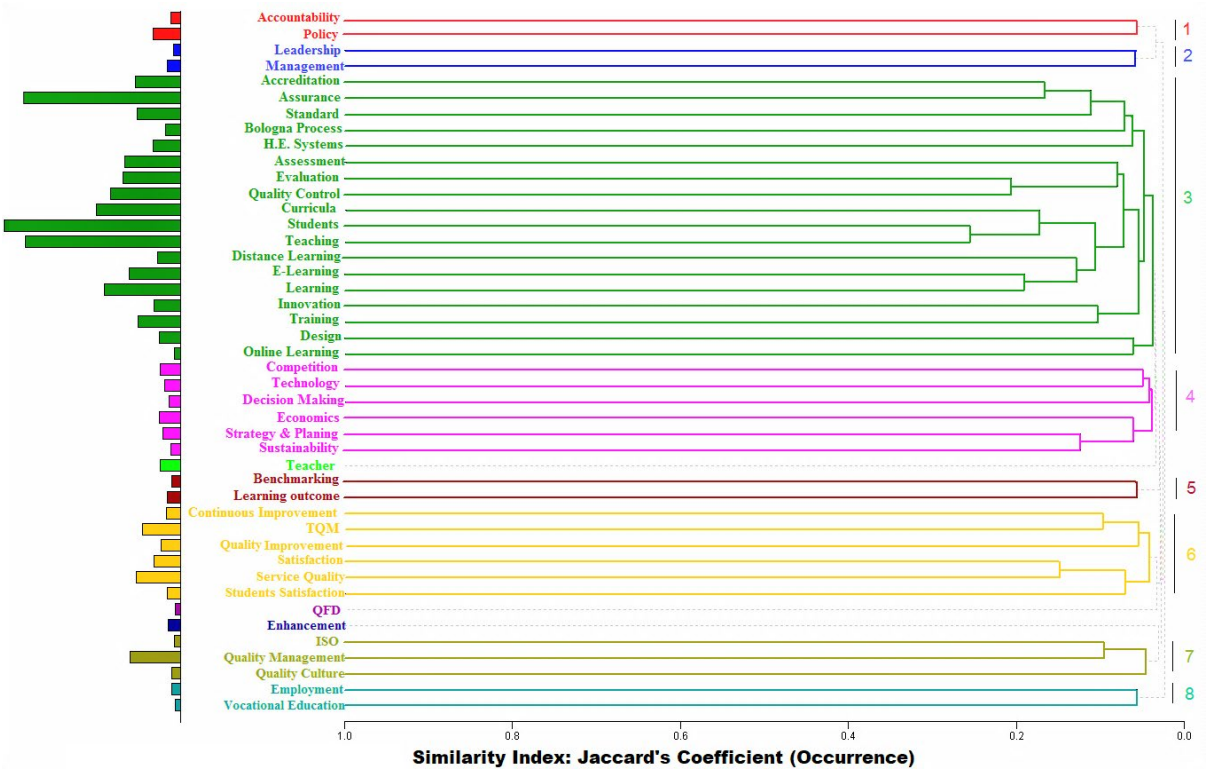

Figure 4- 2: Dendrogram for the field of quality in higher education research.

The fourth group (5.95%) in the dendrogram consists of two branches. Each branch includes three topics. The first contains the topics <Competition>, <Technology>, and <Decision-Making>, while the second contains topics such as <Economics>, <Strategy & Planning>, and <Sustainability>. The frequencies of all the topics in this group are close to each other. The frequencies range from 60 to 85. The fifth group has only two topics, which are <Benchmarking> with a frequency of 35 and <Learning outcome> with a frequency of 52.

The sixth group includes six topics divided into two branches, which constitute almost 10% of the topic. The first branch contains topics connected to <Continuous Improvement>, <TQM>, and <Quality Improvement>, whereas the other contains the topics <Satisfaction>,

<Services Quality>, and <Students Satisfaction>. The most frequent topics in this group are <TQM> with a frequency of 147 and <Service Quality> with a frequency of 220.

The last two groups in the research field are the group of <ISO>, <Quality Management>, and <Quality Culture>, with a percentage of 4.19%, and the group of <Employment>, and <Vocational Education> with a percentage of 0.89%.

In summary, the static view of the research field shows that the research area consists of several groups, each containing a different number of topics that are connected to each other. This indicates that topics within a group have been significantly studied in the research field with other topics that exist within that same group in comparison to topic present in other groups. For example, there is a significantly higher amount of research that addresses topics such as (accreditation and quality assurance), (evaluation and quality control), (continuous improvement and TQM), (ISO and quality management), (service quality and satisfaction), or (leadership and management), in comparison to research that studies topics like (accreditation and satisfaction), (service quality and quality control), or (assessment and benchmarking). Results on topic interconnections could be of interest to researchers in identifying literature research gaps and topics to follow up on in future research.

4.7 THE DEVELOPMENT OF THE RESEARCH FIELD OVER TIME

Link analysis (similarity-based) is the technique employed to demonstrate the evolution of the research field of quality in higher education. The analysis aims to illustrate the prominent topics in the research field, in addition to the relationships between these topics cumulatively over time, graphed through nodes and links. Each node represents a prominent topic, while the thickness of links denotes the strength of the relationships among topics (see Figure 4-3).

The figure demonstrates the cumulative development of the research field at five-year time intervals. It shows that the number of prominent topics dramatically increases until around the

year 2005, after which the rise of prominent topics decreases significantly until reaching stabilisation. Furthermore, the number of links among the topics increases over years, then begins to noticeably decrease in the last ten years.

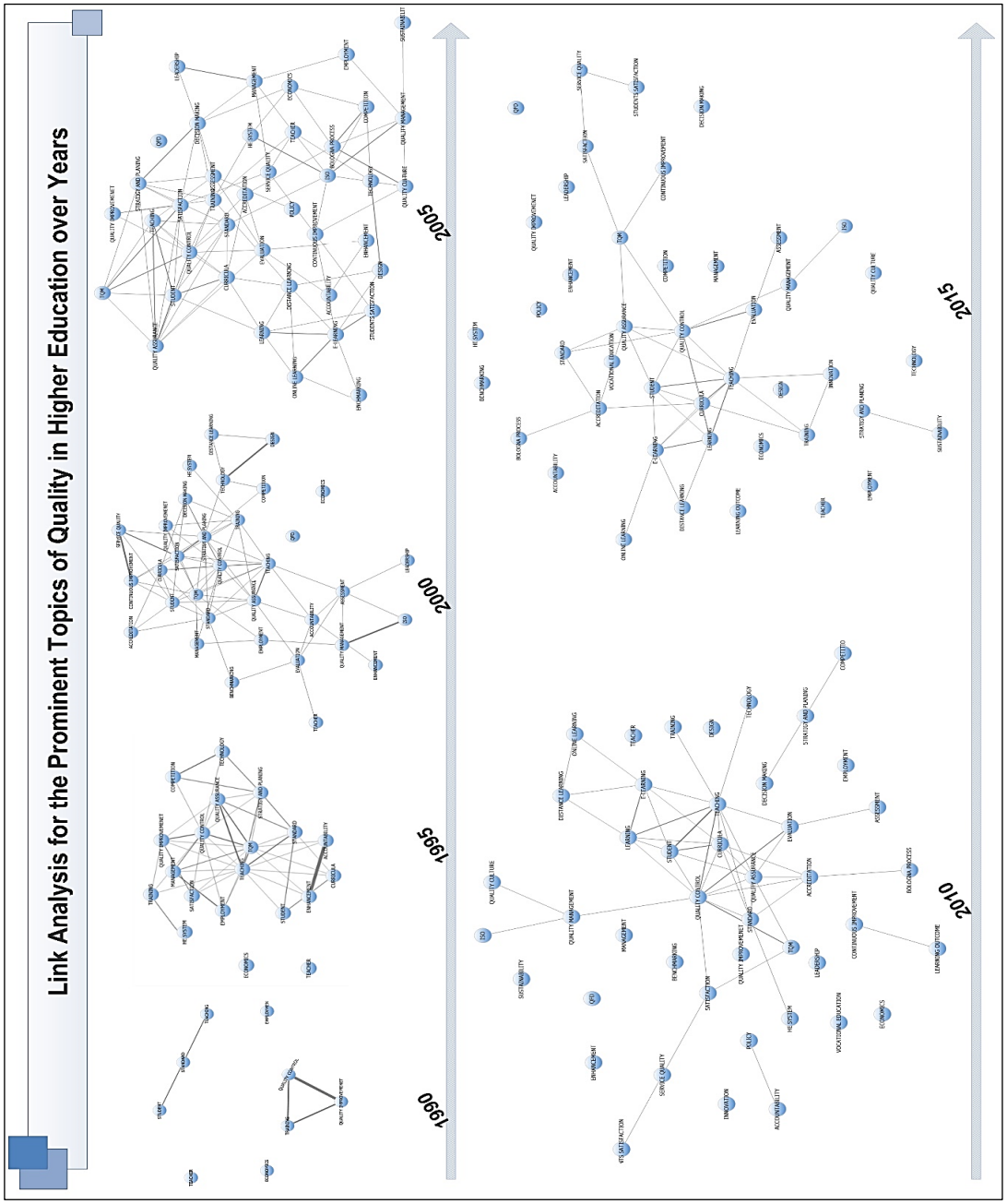

Figure 4- 3: Link analysis for the prominent topics of the research field over the years.

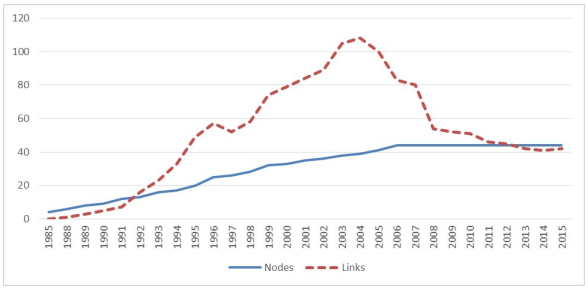

Figure 4- 4: Number of nodes and links extracted from the link analysis (similarity-based) over time.

In order to portray the full dynamic picture for the development of the research field, a yearly time-point analysis was conducted (see Figure 4-4). As seen in the figure, the number of prominent topics increased until 2006, and then plateaued. However, the number of links between topics reached a peak at 2004, after that, began to decline.

This indicates that the research field previously tended to have studies that address several prominent topics simultaneously but, after 2004 when the number of links began to decline, the research focus seems to have shifted into studies that concentrate on one prominent topic at a time, possibly as each topic has become rich enough to be analysed deeply as a standalone topic.

Accordingly, it appears that the research field of quality in higher education became somehow saturated given that the number of new prominent topics remained steady during the last ten years (see the nodes line). Furthermore, the research field became more focused where each study explores an individual prominent topic unlike how it was before.

4.8 THE KEY AREAS OF THE RESEARCH FIELD

The constrained multidimensional scaling chart (Figure 4-5) represents the prominent topics as circles. The size of the circle represents the frequency of the subject whereas the distance between the two circles indicates how the subjects tend to appear together in the same documents. The shorter the distance between the circles, the more the topics appear together in

the publications. This chart is useful for detecting the fundamental dimensions of the research field and the extent to which those topics are linked.

Although the research field seems to be divided into areas from a subjective perspective, three related issues were taken into consideration during the processes: first, how the prominent topics are located in the chart; second, the distance between topics (the similarity index); and third, a logical understanding of the nature of the research field.

The results show that the research field consists of four main areas, each of which is divided into sub-areas that include some topics. Each area is identified by a name derived from the group topics themselves as closely as possible.

(I) Education System area: The largest area, it makes up around 73% of the research field. It includes 17 different prominent topics distributed over four sub-areas:

- Quality System: This constitutes around 38% of the Education System area and involves topics related to the quality system or its relevant topics, such as <H.E. System>, <Standard>, <Assurance>, <Evaluation>, <Assessment>, <Accreditation>, <Quality Control>, and <Design>.
- Education Substrates: This is the largest sub-area among the others with 43.24% of the Education System area. It consists of topics related to the key components of the education process, that is <Student>, <Teaching>, <Learning>, and <Curricula>.
- Learning Type: This constitutes 10.5% of the sub-area and contains topics related to the type of learning, that is <E-Learning>, <Online Learning>, and <Distance Learning>.
- Other topics: This is the smallest sub-area, constituting 8.16%, and it encompasses <Innovation>, <Bologna Process>, and <Training>.

(II) System Improvement area: The second area in the research field contains six topics from the second group. It has three sub-areas. The area forms 9.5% of the research field.

- Satisfaction & Service: This is the largest part of the second area, comprising 59.7% of the total area. It includes the topics <Quality of Services>, <Satisfaction>, and <Students Satisfaction>.
- Improvement: This includes topics related to <Quality Improvement> and <Continuous Improvement>.
- Quality System: This includes a quality system, which in this case is TQM.

(III) Supporting Environment area: This is the smallest area in the research field. It includes six prominent topics:<Competition>, <Technology>, <Economics>, <Sustainability>, <Strategy & Planning>, and <Decision-Making>. This area covers 5.9% of the research field.

(IV) Managing Quality area: This consists of nine prominent topics and covers 8.6% of the research field. It includes two sub-areas:

- Management & Quality: This includes topics associated with management issues, such as < Policy>, <Accountability>, <Management>, <Leadership >, and <Quality Culture>, and different quality systems, that is <Quality Management > and <ISO>.
- Outcomes: This includes topics related to <Benchmarking > and < Learning Outcome>.

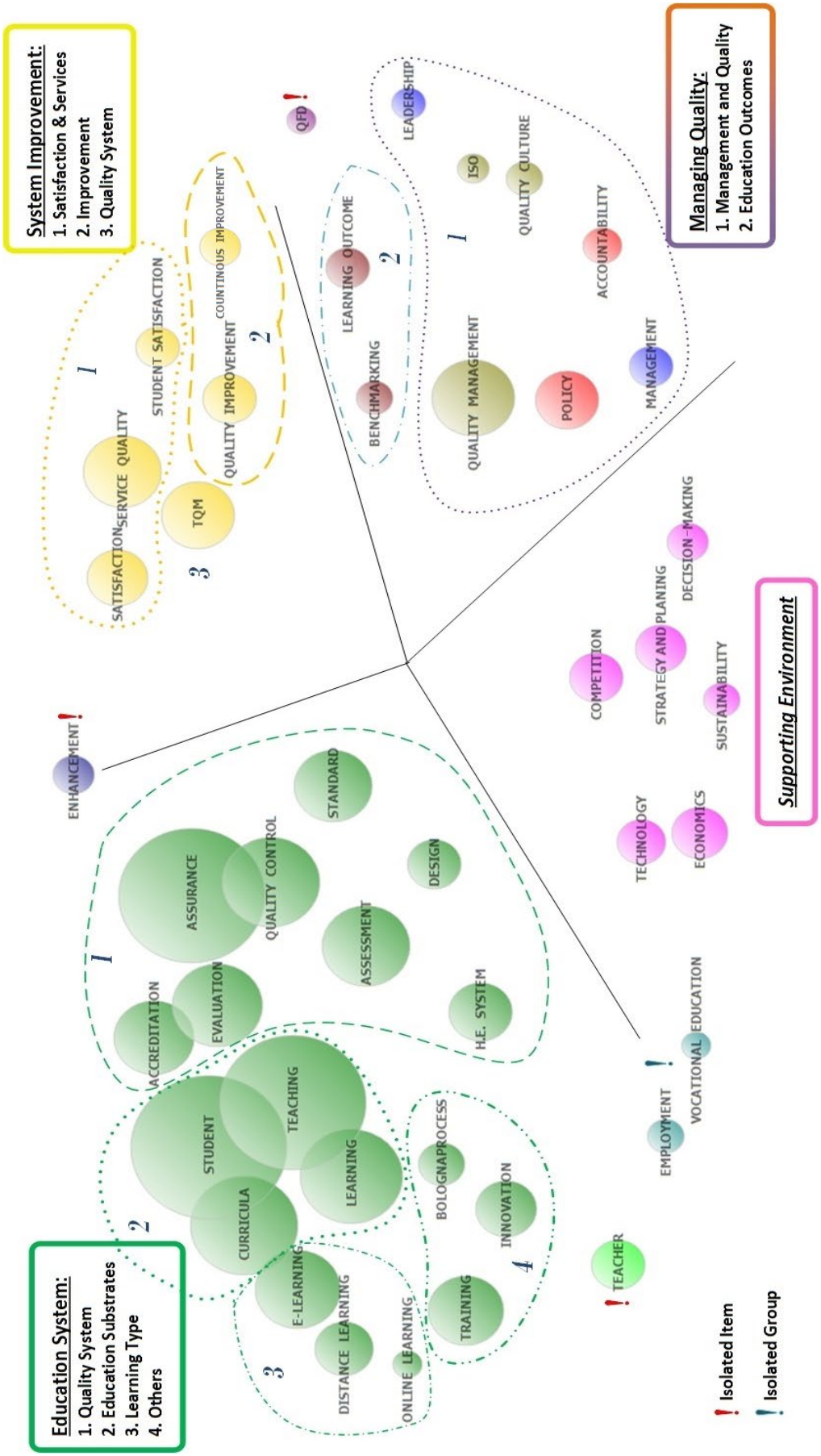

Figure 4- 5: Constrained multidimensional scaling of prominent topics of quality in higher education.

The previous results are summarised in Table 4-3, which demonstrates the areas and their sub-areas within the quality in higher education research field and how they are divided into groups. The table excludes a small part of the research field (3.25%), which consists of an isolated group (Group 8) in addition to isolated topics (<QFD>, <Teacher>, and <Enhancement>).

Considering the positions of quality initiatives in Figure 4-5, it appears that several quality initiatives have been addressed in quality in higher education field such as TQM, ISO, quality management, and quality assurance. However, these prominent topics are located in different places on the multidimensional scaling plot. This indicates that, the research field puts a strong focus on dissimilar topics related to each quality initiatives. This, however, does not imply that the quality initiatives did not have a common ground but that each quality initiative became a standalone key topic in the research field.

Furthermore, these initiatives are surrounded by different topics that could reflect their own meanings or definitions, for instance, the prominent topic <Assurance> is located close to <Evaluation>, < Standards>, and <Accreditation>. This goes in a line with model of Harvey and Newton (2004, p. 150) where they define to the approaches of external quality evaluation as accreditation, audit, assessment and external examiner; and also goes in a line with what Kis (2005) stated about the quality assurance approaches in higher education as he mentioned that the key approaches to quality assurance are accreditation and evaluation (contains assessments and audit) in order to control the processes of teaching and learning, and to assure that the internal procedures are designed to achieve the educational institutions' goals.

Similarly, the close distance between <Assurance> and <Quality Control> is in agreement with their definitions (See ISO, 2015) where both are recognised as a part of quality management and have interrelated activities to fulfil quality requirements. In the same vein, 'TQM' is adjacent to topics like <Satisfaction>, < Students Satisfaction>,<Quality

Improvements>,<Continuous Improvement>, and <Service Quality>, which is consistent with the different descriptions of TQM in higher education (Wiklund *et al.*, 2003; Sallis, 2002; Sherr & Gregory Lozier, 1991), where all topics revolve around the concepts of customer satisfaction, all-member participation and continuous improvement in order to provide a better service to the customer.

A final example, both <Quality management> and <ISO> are surrounded by topics like <Leadership>, <Accountability>, <Policy>, and <Management>. Which goes in line with the meaning of both concepts that refers to managing the quality system applied in higher education institutions.

Table 4- 3: Areas in the field of quality in higher education research.

Area Name	Group	Frequency		Percentage		Sub-area	Frequency	Percentage	Topics
Education System	Group 1	4,937		72.68%		***Quality System***	1,880	38.1%	Accreditation, Assurance, Standard, Higher Education Systems, Assessment, Evaluation, Quality Control
						Education Substrates	2,135	43.2%	Curricula, Student, Teaching, Learning
						Learning Type	519	10.5%	E-Learning, Distance Learning, Design, Online learning
						Others (related topics)	403	8.2%	Bologna Process, Innovation, Training
System Improvement	Group 2	649		9.56%		***Quality System***	147	22.9%	TQM
						Improvement	120	18.5%	Continuous Improvement, Quality Improvement
						Service & Satisfaction	382	59.9%	Satisfaction, Service Quality, Student Satisfaction
Supporting Environment	Group 3	404		5.95%		***Supporting Environment***	404	100%	Competition, Technology, Decision-Making, Economics, Sustainability, Strategy & Planning
Managing Quality	Group 4	284	581	4.20%	8.55%	***Management & Quality***	494	85%	ISO, Quality Management, Quality Culture, Accountability, Policy, Leadership, Management
	Group 5	133		1.96%					
	Group 6	87		1.29%					
	Group 7	77		1.14%		***Outcomes***	87	15%	Benchmarking, Learning Outcome
Total		**6,571**		**96.74%**		-	**6,571**	-	-

4.9 CONCLUSION

Keywords from all peer-reviewed publications available on the SCOPUS database published in the field of quality on higher education until late 2015 were analysed. The most frequent

keywords linked to quality in higher education that appeared in these publications were extracted, and the prominent topics in the field of quality in higher education were identified.

This study reveals how the structure of the research field is mapped. The research field is divided into four main areas gathered from ten sub-areas, namely, 'Education System', 'System Improvement', 'Supporting Environment' and 'Managing Quality'. Additionally, it shows that only ten prominent topics out of 44 occur in the majority (around 60%) of the literature, whereas the other 34 topics are only found in the remaining 40%. This finding indicates the existence of areas that are of particular interest within the research field.

The results show that the research field focuses heavily on the quality of educational components (such as, students, teaching, learning and curricula) more than quality system topics (such as, quality management systems, total quality management, QFD and ISO).

The illustration of quality topics could also demonstrate the nature of the quality initiatives, as each is located in a different area in the research field and in close proximity to specific topics that clarify and explain each initiative.

Moreover, the results pointed out that the research field of quality in higher education shows different levels of interest in the quality initiatives. It seems that the research field has much attention to quality assurance system topics more than quality management and, to a lesser extent, other initiatives such as TQM, QFD and ISO.

The research field appears to have become saturated during the last decade, where the number of newly-introduced prominent topics decreased significantly. In the meantime, the research field has become more focused on each individual topic. This result is somehow expected for any research field during its developmental stages, where the number of topics

dramatically increases, with many connections among them, until a certain point is reached, after which each prominent topic is individually expanded and deeply investigated.

Illustrating the key topics for the research field and the connections among them from a static and dynamic point of view provide a general picture that helps researchers to understand more the nature of the research field, estimate number of heavily and lightly addressed topics, in addition to the topics' development in the research field. Moreover, it points out to the related topics that have direct and indirect connections with a studied topic. Thus, the implemented method in this paper might be used as an additional technique for different types of studies that seek for example to explore key topics, creating a comprehensive literature review or finding study gaps and future research.

4.10 LIMITATIONS AND FURTHER STUDIES

This study and the data-set are valid and reliable as long as SCOPUS does not make any changes to its database contents. However, neither SCOPUS, nor any other database, could contain all existing targeted journals; the conclusions and visualisation charts contained within this study may be different from other study results that sampled another set of journals or databases, even if the same period of time was taken into consideration.

Other researchers may expand the keyword data-set and search not only in one literature database but also in multiple databases. Moreover, researchers may also consider the effect of language on the results by selecting journals or databases that contain publications in languages other than English.

Conducting the same study with different methodologies (methods, tools, and techniques) may indicate more clearly how the higher education quality structure is mapped. Another possible way to reveal the structure of quality in higher education literature is through conducting text analysis based on a full-text approach.

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CHAPTER FIVE: THE THIRD STUDY

"IMPLEMENTATION OF QUALITY ASSURANCE STANDARDS IN EUROPEAN HIGHER EDUCATION: DOES CONTEXT MATTER?"

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Implementation of Quality Assurance Standards in European Higher Education: Does Context Matter?

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ABSTRACT

The vast majority of studies concerning the implementation of quality assurance in higher education institutions have been conducted from a national perspective, with few cross-national studies. This study aimed to explore the implementation of quality assurance standards in Europe from a comparative perspective.

To compare countries, we developed a questionnaire based on Standards and Guidelines for Quality Assurance in the European Higher Education Area (ESG). The results indicate that HEIs mainly formulate their QA systems according to national standards or based on their own needs. The main emphasis in QA is on teaching and learning activities and curriculum development.

The major contribution of the study lies in showing how different country settings affect the implementation of QA standards through presenting the strengths and weaknesses of QA implementation among several European countries.

Keywords: Quality Assurance, Higher Education, Quality, Comparative analysis, European Higher Education.

5.1 INTRODUCTION

From the early 2000s, there has been an increasing focus on quality assurance (QA) in European higher education institutions (HEIs). Recognition of the need for quality in education is by no means a new feature of the European education agenda. Nevertheless, the implementation of QA in HEIs did not significantly increase until the middle of the last decade. Efforts in this direction were strongly linked to the Bologna Process in which one of the aims is to assure the quality of teaching and learning in European higher education (Gvaramadze, 2008).

In general, the purposes of QA vary from one institution to another. Some institutions focus on institutional performance assessments or on institutional learning, whereas others pay attention to improving their academic and management activities. Yet others concentrate on the equal allocation of resources, on compliance with external quality standards, or on accountability to society and government (Martin & Parikh, 2017, p. 37).

The European Union has established several projects, initiatives, and organisations supporting QA seeking to enhance higher education. For example, standards and guidelines for quality assurance in the European higher education area (ESG) have been established to support the European educational system. This aims to set a framework for a QA system applying to teaching and learning activities. The intention is that it will advance quality improvement and assurance in higher education in Europe, support mutual trust in order to facilitate mobility and recognition across borders, and offer information on QA in European higher education (ESG, 2015).

Although QA seems to be becoming more trans-national in nature (Ewell, 2010), only a few studies on QA have been conducted from a cross-national perspective. Kohoutek and colleagues (2018), for example, studied how ESG were taken up by higher education

institutions in Portugal and the Czech Republic and noticed that the differences between the styles of the two countries point to the complexity in EU policy implementation. They demonstrated that country and university organisational characteristics matter by creating a variety of institutional responses reflecting political or policy choices on the ESG initiative.

The aim of the present study is thus to examine the implementation of quality assurance in several European countries in the frame of ESG. This is expected to provide new knowledge on quality assurance across European countries; the analysis includes especially a comparative perspective that has not gained much prominence in the literature on higher education quality assurance. Therefore, this research will attempt to answer the following questions:

1. What are the main characteristics of QA in European higher education institutions?
2. How well have higher education institutions implemented QA standards from their own perspective?
3. How well have countries implemented QA standards, and what kinds of differences exist between countries in their implementation of the standards?

5.2 QUALITY ASSURANCE IN HIGHER EDUCATION

A considerable number of articles have been published on quality assurance in higher education. Thus far, a number of studies have addressed QA as a concept (e.g. Harvey & Green, 1993; Harvey & Knight, 1996; Lomas & Ursin, 2009), dealing with its dimensions (Lagrosen *et al.*, 2004; Owlia & Aspinwall, 1996), and the approaches to it (Woodhouse, 1999). Furthermore, several studies discussed the progress on national QA standards in term of processes and practices (cf. Harvey & Williams, 2010). The overall aim has been to understand the nature of quality assurance in education, and how it can be achieved.

A range of understandings and definitions of QA have been introduced in the literature. Some of them have described it as a way to ensure confidence in educational institutions,

following the successful fulfilment of the standards and requirements applied in evaluation. In line with this notion, Petersen (1999) viewed QA in higher education as 'the means by which an institution can guarantee with confidence and certainty, that the quality standards and quality of its educational provision are being maintained and enhanced' (1999, p. 15).

Along similar lines, Borahan & Ziarati (2002) saw QA in education as a set of necessary planned actions that provide confidence in any educational service or product to assure that its quality requirements will be satisfied. In the same vein, Martin & Stella (2007) regarded QA as a set of mechanisms aiming to satisfy higher education purposes, in addition to meeting general or specific quality standards at a programme or institutional level (2007, p. 34).

However, some authors have focused more on the quality aspect of QA. Thus, Vlasceanu and colleagues (2007) defined QA as an ongoing process of evaluation which includes monitoring, assessing, maintaining, and improving the quality of higher education programmes, institutions, or systems. Quality assurance can also be seen as a tool for accountability and/or improvement. Campbell & Rozsnyai (2002) considered QA to consist of policies and processes to maintain quality, with a focus on accountability to stakeholders. This view was supported by Srikanthan & Dalrymple (2004), who explained that the focus should be on improvement in the first place with accountability then as a consequence.

In regard to QA models, many different models have been introduced into the domain of quality in higher education (cf. Matei & Iwinska, 2016). These models differ from each other according to the perspectives and strategies applied. Cheong Cheng & Ming Tam (1997), for example, summarised seven different models for quality in the educational sector, namely, goals for specification model, a resource input model, a process model, a satisfaction model, a legitimacy model, an absence of problem model, and an organisational learning model. These models are said to differ from each other in terms of their conceptualisation, usefulness, and

areas for evaluation. In further explication, the authors emphasised that the existence of several quality models is both important and valuable, providing possibilities to establish a comprehensive understanding of educational quality in HEIs.

Along similar lines, a study by Prisăcariu (2014) distinguished between several main models of QA in European higher education systems. Prisăcariu outlined four models for QA in education. The first model relies on a 'review of the comprehensiveness, functioning and effectiveness of the quality assurance systems themselves'. The major focus here is on the quality of institutional procedures, methods, processes, and instruments that are used for organisational operations. The second model depends on a 'review of the quality itself, against fixed external QA standards'. The purpose here is to provide a guarantee to external and internal stakeholders that the accredited institution meets the minimum quality requirements. The third model involves 'assessment of the quality of the "Results'. This stress the performance of the educational system, and the intended learning outcomes. The final model involves 'the quality of the "governance" of the education system'. In contrast with the previous model, this model concentrates on the entire institution rather than on a particular study programme. Furthermore, it revolves around the mission and objectives of the institution, and not around external evaluation standards or criteria.

In sum, it seems that quality assurance in higher education involves a wide range of understandings, approaches, models, challenges, and definitions. This – coupled with both a complex higher education environment (Kauko, 2014; Nascimbeni, 2015) and a complex research field (Alzafari, 2017; Alzafari & Perner, 2018) – makes the implementation of QA in HEIs a challenging endeavour. Undoubtedly, the complexity of the matter has implications for researchers attempting to assess quality assurance and to conduct related comparisons.

An initial challenge will be that of designing an appropriate research instrument to compare different kinds of QA across a wide range of European HEIs, bearing in mind the variety of quality criteria, QA standards, and guidelines applicable. Differences may need to be addressed on (I) the national level (with countries like Germany and Spain having more than one national agency), (II) the European level (involving differences among the EU countries), (III) the educational systems, and (IV) the scope of the quality evaluation (at national, institutional, and programme level). Therefore, in order to assess the QA implemented in the different types of HEI, and to embark on a comparison between countries the present study utilised the ESG criteria. The criteria (referred to as 'QA standards') are set out in the next section below (See Table 5-1).

5.3 METHODOLOGY

The methodology of this paper is based on quantitative data analysis for several European countries as this paper attempts to reveal the main characteristics of QA implementation at European HEIs. The data is collected through a survey designed based on the section 1 of ESG titled *'Internal QA Standards'*. The questionnaire was circulated using an online survey service and subjected to later analysis through statistical analysis software.

5.3.1 THE PARTICIPANTS AND SAMPLE SIZE:

The sample comprised HEIs' respondents (n=297) from more than 20 European countries. The first step of the analysis included the responses from all the participants as this study investigates QA implementation in the European HEIs. However, the second part (comparison of countries) included only countries that have enough responses to be considered a representative sample size to the total number of HEIs in a country (at least 10%). Altogether 13 countries (n=250) fulfilled this condition: Austria, Czech Republic, Denmark, Estonia, Finland, Germany, Italy, Kosovo, Latvia, Lithuania, Netherlands, Spain, and Switzerland.

The sample contained different types of higher education institutions, namely multidisciplinary universities (50.8%), universities of applied sciences (16.8%), specialised universities (11.8%), technical universities (7.1%), colleges or schools (5.7%), and also other types of HEIs which did not fit into the previous categories (7.7%). In terms of the public/private division, the sample was distributed among *public institutions* (77.1%), *private institutions* (20.2%), and *neither public nor private institutions* (2.7%).

5.3.2 QUESTIONNAIRE DESIGN

The questionnaire was designed to include only criteria that are associated with the *internal quality assurance* of HEIs. Thus, the survey contained the nine ESG standards previously mentioned (see also Table 5-1, and the Results section, in which the standards are dealt with one by one). The survey started with the collection of general information on the HEIs, and on the quality system applied. This was followed by questionnaire items related to the QA standards.

Table 5- 1: QA standards and sub-standards addressed in the questionnaire.

#	Standard	Sub-standards
1	A policy for quality	➢ QA strategies
		➢ Internal stakeholder involvement
		➢ External stakeholder involvement
2	Design and approval of programmes	➢ Curriculum development
		➢ Stakeholders' involvement in designing curricula
3	Student-centred learning, teaching, and assessment	➢ Students' learning
		➢ Student assessment
4	Student admission, progression, recognition, and certification.	
5	Quality of the teaching staff	➢ Teaching competence
		➢ Academic assessment
6	Learning resources and support for students	
7	Information management	
8	Public information	
9	Ongoing monitoring and review of programmes	

In order to obtain complete and accurate responses, each standard had its own section in the questionnaire. The sections contained definitions and explanations that were intended to assist the participants in understanding the survey components.

In order to check the content validity of the questionnaire, feedback was obtained from three researchers in the field of quality in higher education. This step was valuable in checking whether the survey components covered the full domain of the content, with adequate representation in the questionnaire items, and also in checking whether the items measured what they were supposed to measure (Cooper & Schindler, 2011). Furthermore, the questionnaire was evaluated in terms of readability, layout and style, feasibility, and clarity of wording, in order to reduce any ambiguity.

A pre-test was carried with a sample of the target group (persons responsible for quality affairs in HEIs) before the data collection phase was started. A web-based questionnaire was the most viable way of collecting data, since the respondents were located in many different European countries. Emails including the questionnaire link were sent to quality representatives in HEIs. In these, the detailed aims of the survey, plus the confidentiality of the responses were explained.

In order to test the reliability of the instrument, Cronbach alphas were calculated. The Cronbach alpha is a method to assess the internal consistency (homogeneity) of questionnaire items (Cronbach, 1951). It is commonly used in quantitative research to measure the 'fit of purpose' (Taber, 2017) as well as to evaluate the precision of a measurement instrument (Cooper & Schindler, 2011, p. 280). The results showed that all of the QA components had at least acceptable alpha coefficients, with α range from 0.64 to 0.92.

5.4 MAIN QA CHARACTERISTICS IN EUROPEAN HEIS

Figure 5-1 demonstrates that the participating HEIs did not primarily focus on systems based on standardised quality initiatives (such as Total Quality Management) in conducting quality assurance in their institutions. Most of the institutions implemented a quality system based on national standards (35.7%), or a model developed for their own needs (26.6%). More than 11% of the institutions applied a quality system which was not based on any specific model.

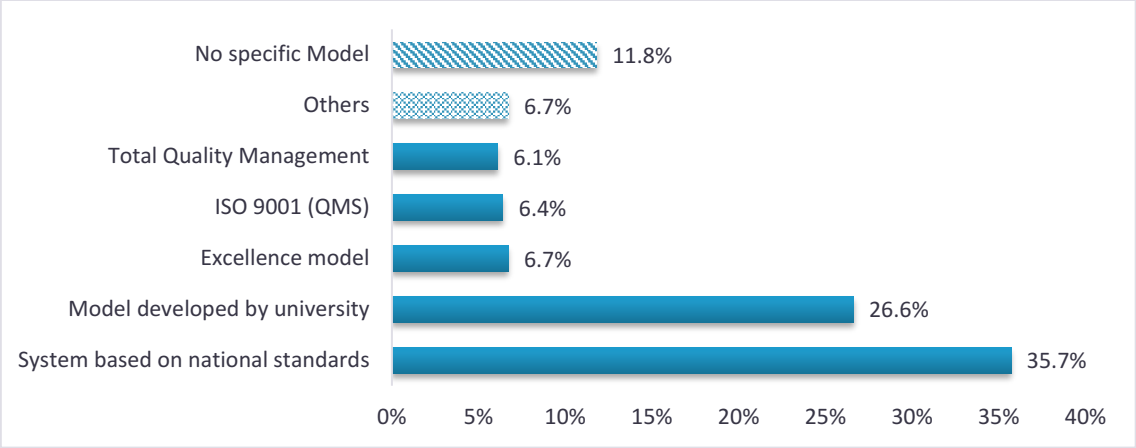

Figure 5- 1: Quality systems applied in higher education institutions.

The participants were asked whether their quality management system (QMS) structure is centralised (i.e. with a quality unit established at the institutional level), decentralised (with a quality representative in each individual department) or exhibiting a mix of the two. The analysis indicated that more than half of the institutions (52.9%) had a mixed system. In other words, the institutions had a unit responsible for quality issues at the institutional level, and at the same time, a departmental unit, or a programme addressing quality issues at the departmental level. Around 40% of the institutions had only a central unit for quality management, i.e. one responsible for the entire quality system. Fewer than 5% of the participating institutions had a totally decentralised quality system.

This study also investigated the extent to which institutions implemented quality assurance to cover their basic missions. The results showed that teaching and learning activities,

curriculum development, and student services have the highest value in this regard, followed by organisational management and research (see figure 5-2).

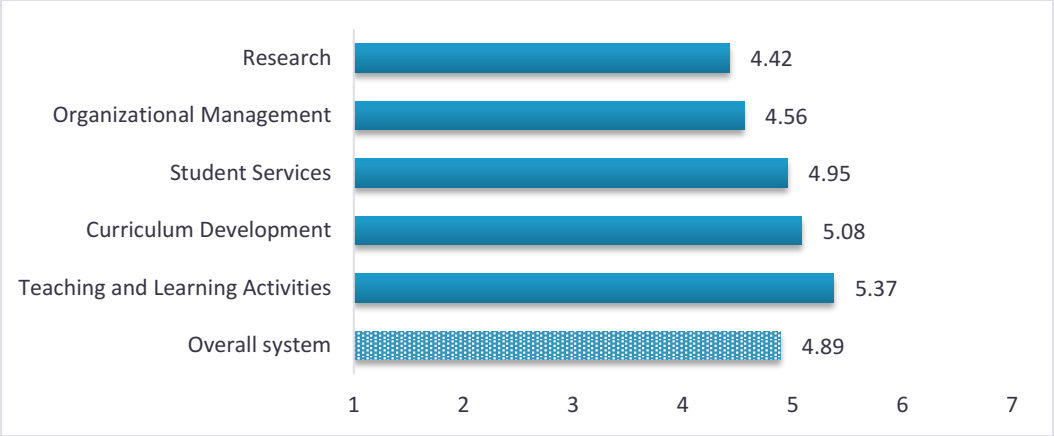

Figure 5-2: QA implementation in different activities conducted by higher education institutions.

The responses also reveal that the vast majority of HEIs have QA systems as well as policies for managing and assuring the quality of educational activities. However, around 85% of the respondents told that they have such systems and policies on the institutional level, whereas only 9% reported having QA on the faculty level. On the other hand, only a few HEIs (around 5%) had not yet started building a QA system and policies within their organisations.

5.5 IMPLEMENTATION OF QA STANDARDS AT THE INSTITUTIONAL LEVEL

In this section, this study reports how the participating institutions perceived their implementation of the nine QA standards (Table 5-2). It seems that European HEIs have successfully adopted many standards, such as those concerning learning resources and support for students, information management, and design and approval of programmes. However, a couple of standards are still considered challenging matters to be implemented, for instance, student assessment, teaching competency, and ongoing monitoring and reviewing of study programmes. This might indicate that although QA implementation is progressing well across the European countries, HEIs are still struggling with several challenges.

Table 5- 2: QA in European higher education. The scale applied is standardised from 1 to 7 for all items.

Category	Sub-category	Mean
1 Policy of quality	**Overall 1st standard**	**5.2**
	QA strategy	5.6
	Internal stakeholders [I]	5.3
	External stakeholders [II]	4.6
2 Design and approval of programmes	**Overall 2nd standard**	**5.6**
	Stakeholders' involvement in designing curricula [III]	5.2
	Curriculum development	6.2
3 Student-centred learning	**Overall 3rd standard**	**4.9**
	Students' learning	5.7
	Student assessment	4.1
4 *Student admission, progression, recognition and certification*		5.9
5 Quality of the teaching staff	**Overall 5th standard**	**5.1**
	Teaching competence	4.2
	Academic assessment	5.9
6 Learning resources and support for students		6.0
7 *Information management*		6.0
8 *Public information*		6.3
9 *Ongoing monitoring and review of programmes*		3.9

I: *including Academics (5.7), Administration staff (5.6), and Students (4.7).*
II: *including QA Agency (5.5), Graduates (4.6), Labour market (4.5), and Government (3.9).*
III: *including Academics (6.4), Students (5.2), Labour market (4.9), and Graduates (4.2).*

The first standard, *a policy for quality*, includes topics related to embedding quality to the strategic management plans of HEIs, the involvement of internal stakeholders in implementing and developing quality policies, and the participation of external stakeholders.

Quality in higher education is usually embedded within the strategic plan of HEIs for a successful implementation. However, within this plan one would expect to see a description of the structures, processes, and responsibilities designed to enhance the quality of HE activities. Since quality is perceived as a major driver for national economic development and competitiveness, governments put considerable pressure on educational institutions to ensure the quality of education, and the institutions respond by placing quality enhancement at the top of their strategic agenda, paying due attention to the competitiveness of the education market

(Martin & Stella, 2007). As expected, the survey results reflected this, with most of the participants reporting having a quality assurance policy within their strategic plans (mean score = 5.6).

Several scholars have addressed the topic of stakeholders in higher education (Chapleo & Simms, 2010; Kettunen, 2015), along with their interests and their roles (Pinheiro, 2015), and including also their influence on curriculum and programme design (Westerheijden *et al.*, 2013). Many parties have been identified as stakeholders, including alumni, parents, taxpayers, employers, students, accreditation agencies, governments, and non-government organisations (Marshall, 2018, p. 77). They have been categorised as either *external* or *internal* stakeholders (Burrows, 1999). Amaral & Magalhães (2002) define internal stakeholders as those 'who participate in the daily life of the institutions', whereas external stakeholders are a 'group or individuals that have an interest in higher education even though they are not members of the higher education community' (2002, p. 11).

As noted by Ulewicz (2017), both internal and external stakeholders have a key influence on how effectively a HEI functions. Hence, in the present study (as in other studies), students, academics, and administrators are considered to be internal stakeholders, while regarding graduates, the labour market, governments, and accreditation agencies as external stakeholders.

The results indicate that with regard to involvement in the quality issues of HEIs, the role of internal stakeholders is greater than that of external ones (mean scores of 5.3 and 4.6, respectively). Furthermore, as far as internal stakeholders are concerned, it seems that students have less involvement than the other internal stakeholders – this despite the considerable focus on student involvement in the literature (cf. Alzafari, 2017). Among the external stakeholders, on the other hand, graduates and the labour market have less involvement than QA agencies. This latter observation is by no means unexpected, given that most European countries impose

an accreditation process on HEIs on the grounds of accountability. Moreover, in some countries QA agency is considered by HEIs to be a fundamental point of reference in these matters, due to the vast experience of the agency in quality implementation.

As regards the second QA standard, related to the *design and approval of programmes*, the HEIs did well in this aspect (mean score = 5.6). In other words, they conducted many processes (such as defining the learning outcomes and the expected student workload) with a view to enhancing their study programmes (mean score = 6.2). Additionally, they included stakeholders in the development of their study programmes (mean score = 5.2). According to the analysis of this study, the participation of internal stakeholders (i.e. academics and students) was much higher than that of external stakeholders (i.e. graduates and the labour market).

The third QA standard, which encompasses *student-centred learning,* is defined as circumstances where students select their own learning goals and means (Hannafin, 2012). In addressing this standard, we first focused on the sub-category labelled *student learning*. This refers to the diversity of learning paths, the variety of learning delivery methods, the evaluation of the teaching methods, and the autonomy of the learner. With regard to the second sub-category, namely *student assessment* (which includes assessment both *of* and *by* students), this study investigated whether the quality assurance processes took into account critical issues such as examination methods, appeal procedures, the methods of assessment, and the learning feedback given to students. Of particular importance was the extent to which HEIs considered the *students' own assessment* of their progression and their future careers, since such a feature allows students to indicate how far the intended learning outcome is achieved in their own eyes. The results indicate that the HEIs considered the 'student learning' sub-category to be implemented better than the 'student assessment' sub-category (with respective mean scores of 5.7 and 4.1).

The fourth QA standard (referring to *student admission, progression, recognition, and certification*) is dealt with below, along with standards 6, 7, and 8. The fifth QA standard, which concerns the *quality of the academic staff*, is an important component of quality assurance. In this study, it included two sub-categories: (I) processes of academic recruitment and development; (II) methods and tools for assessing the staff.

As noted by Martin & Parikh (2017), many HEIs endeavour to enhance the teaching capacity of academic staff, especially during the early phase of their career. This is based on the observation that effective teaching does not necessarily come naturally to everyone. According to the analysis of this study, the HEIs do emphasise academic assessment (mean score = 5.9). Nonetheless, it seems that the teaching competence of the staff remains an area for development (mean score = 4.2). Previous studies have indicated that educational institutions focus more on research output than on teaching activities in their academic assessments (Ramsden, 1991, p. 129). Despite this, our own results indicate that both teaching and research performance are taken into consideration alike.

QA standards 4, 6, 7, and 8 are associated with ensuring the quality of information and resources related to students' learning. the analysis of this study indicated that HEIs have done well in implementing these standards, with means ranging from 5.9 to 6.3. This means that the HEIs have successfully developed and enhanced several aspects, such as student life cycle, learning and teaching resources, provision of support for students, information management, as well as public information on the study programmes.

The results indicate that HE institutions need improvement in monitoring and evaluating their study programmes (standard 9). This had the lowest mean score of all the QA standards (mean = 3.9).

5.6 MEASURING THE QA DIFFERENCES AMONG THE COUNTRIES

Overall, the participating HEIs felt that they had achieved the QA standards well (Table 5-3). Nonetheless, there were differences between countries in terms of their implementation ratings.

Table 5- 3: Implementation of standards for internal quality assurance by country.

Country	N	Overall	1	2	3	4	5	6	7	8	9*
Austria	13	***5.4***	5.2	6.1	4.8	5.8	5.2	5.9	5.9	6.2	3.2
Czech Republic	16	***5.3***	5.3	5.5	4.4	5.7	4.9	6.1	5.8	6.3	3.5
Denmark	11	***5.8***	5.4	5.8	5.9	5.3	6.0	6.3	6.3	6.2	5.3
Estonia	9	***5.9***	5.6	6.2	5.4	6.4	5.7	6.1	6.5	6.6	4.4
Finland	21	***5.4***	5.3	5.8	5.0	5.9	4.7	6.4	6.3	6.3	3.0
Germany	42	***5.3***	5.1	5.7	4.3	6.0	4.9	6.0	6.0	6.3	3.3
Italy	38	***5.1***	4.8	5.2	4.2	5.7	4.4	5.6	5.8	5.9	4.0
Kosovo	15	***5.2***	5.1	5.4	4.9	6.3	4.6	5.4	5.9	6.2	3.4
Latvia	15	***5.7***	5.6	6.0	5.3	6.1	5.2	5.9	6.2	6.6	4.7
Lithuania	13	***5.9***	6.0	6.0	5.6	6.5	5.6	6.5	6.2	6.6	4.6
Netherlands	14	***6.0***	5.4	6.0	6.2	6.0	5.9	6.1	6.0	6.3	5.8
Spain	24	***5.4***	5.2	5.8	4.9	5.9	4.9	6.0	6.0	6.2	3.6
Switzerland	19	***5.4***	4.6	4.9	5.4	6.0	5.7	6.0	5.8	6.2	4.1
All Participants	**297**	**5.4**	**5.2**	**5.7**	**4.9**	**5.9**	**5.1**	**6.0**	**6.0**	**6.3**	**3.9**

***The numbers 1–9 refer to the QA standards set out in table 5-1.**

Regarding the first standard (*policy for quality)*, the respondents considered that they had assurance procedures in place as part of their strategic management (Table 5-4). In the sub-categories covering stakeholder engagement with QA practices, the institutions estimated that they had more engagement with internal than with external stakeholders (Table 5-4). There were some variations between countries: the institutions from the Baltic region seemed to achieve the *policy for quality* standard better than their counterparts in Germany, Italy, and Switzerland.

Table 5- 4: Perceptions on quality policy: strategic management, and the engagement of stakeholders.

Country	N	Quality policy (Overall mean)	Strategic management	Internal stakeholders	External stakeholders
Austria	13	***5.2***	5.8	5.4	4.3
Czech Republic	16	***5.3***	5.9	5.2	4.7
Denmark	11	***5.4***	5.8	5.2	5.1
Estonia	9	***5.6***	5.7	5.9	5.2
Finland	21	***5.3***	5.9	5.7	4.3
Germany	42	***5.1***	5.4	5.1	4.7
Italy	38	***4.8***	5.6	4.8	4.1
Kosovo	15	***5.1***	5.7	5.6	4.1
Latvia	15	***5.6***	5.6	5.9	5.2
Lithuania	13	***6.0***	6.3	6.2	5.5
Netherlands	14	***5.4***	6.0	5.4	4.9
Spain	24	***5.2***	5.5	5.2	4.9
Switzerland	19	***4.6***	5.2	4.7	3.8
All Participants	**297**	**5.2**	**5.6**	**5.3**	**4.6**

Regarding the second standard (*design and approval of the programme*) the participating institutions felt that they had achieved this standard even better than the first one (see table 5-3 above). The tendency in this standard was similar to that in the quality policy, in the sense that internal stakeholders were seen as more active than external stakeholders in helping to design programmes. The participating institutions also viewed their programmes as effective in meeting the objectives set for them. Institutional strategies were sufficiently taken into account. However, there seemed to be differences between countries, in that the HEIs in Switzerland and Italy gave themselves lower scores than institutions from any other participating country.

Table 5- 5: Perception on curriculum design and engagement of stakeholders.

Country	N	Design & Approval of Programmes (Overall)	Curriculum design	Internal stakeholders	External stakeholders
Austria	13	***6.1***	6.5	6.6	4.7
Czech Republic	16	***5.5***	6.1	5.8	4.2
Denmark	11	***5.8***	6.6	5.4	4.9
Estonia	9	***6.2***	6.0	6.6	6.1
Finland	21	***5.8***	6.1	6.4	4.8
Germany	42	***5.7***	6.2	5.9	4.8
Italy	38	***5.2***	5.7	5.5	4.1
Kosovo	15	***5.4***	6.2	5.5	4.0
Latvia	15	***6.0***	6.4	6.0	5.0
Lithuania	13	***6.0***	6.7	5.8	5.0
Netherlands	14	***6.0***	6.5	6.1	4.7
Spain	24	***5.8***	6.5	5.5	4.9
Switzerland	19	***4.9***	5.8	4.9	3.1
All Participants	**297**	**5.7**	**6.2**	**5.8**	**4.5**

The HEIs' scores on the third standard (*student-centred learning, teaching, and assessment*) provided the second lowest mean score for all the standards, even if there were differences between countries (Table 5-6). Italy, Germany, and the Czech Republic gave lower scores for this standard than HEIs from any of the other countries. An additional, the institutions estimated their teaching and learning methods as more student-centred than their ways of assessing their students (Table 5-6).

Table 5- 6: Perception on student-centred learning and assessment.

Country	N	Student-centred learning (Overall mean)	Student learning	Student assessment
Austria	13	***4.8***	5.8	3.7
Czech Republic	16	***4.4***	5.0	3.8
Denmark	11	***5.9***	6.2	5.6
Estonia	9	***5.4***	6.1	4.8
Finland	21	***5.0***	5.9	4.1
Germany	42	***4.3***	5.7	3.0
Italy	38	***4.2***	5.3	3.1
Kosovo	15	***4.9***	5.9	3.9
Latvia	15	***5.3***	5.9	4.8
Lithuania	13	***5.6***	6.2	4.9
Netherlands	14	***6.2***	5.9	6.6
Spain	24	***4.9***	5.7	4.1
Switzerland	19	***5.4***	5.8	4.9
All Participants	**297**	**4.1**	**5.7**	**4.1**

The fourth standard was ranked at the mid-point of all the standards (Table 5-3). There was hardly any variation between the countries, with the exception of Danish HEIs, which had a considerably lower rating than the others in terms of implementing this standard.

According to the participating HEIs, the fifth standard, on assuring *competent teaching staff*, ranked as one of the lowest in terms of the standards achieved (Table 5-3). However, the countries seemed to be divided into those who had strong procedures to assure the teaching competence of the staff (Austria, Denmark, Estonia, Latvia, Lithuania, the Netherlands, and Switzerland) and those who did not score this aspect so highly (Czech Republic, Finland, Germany, Italy, Kosovo and Spain).

The sixth standard concerned whether institutions have provided *sufficient resources* for learning and teaching activities and for student support. This standard achieved some of the highest scores. This was especially the case with countries in Northern Europe. The seventh standard concerned the extent to which institutions *collect, analyse and use relevant information* for the management of their programmes and other activities. The respondents perceived that this was well taken care of. Indeed, there were hardly any differences among the countries (Table 5-3).

The eighth standard, on publishing *clear and up-to-date information on programmes*, was assessed to be at a very high level. This standard was highly ranked in the Baltic countries. However, the ninth standard (on *monitoring and periodically reviewing the institution's programmes* to ensure that they achieved the objectives set for them) scored only 3.9, i.e. the lowest of all the nine standards (Table 5-3). Here also there was clear variation between countries: the institutions from the Netherlands and Denmark felt that they had good monitoring activities in place, whereas in Finnish and Austrian institutions, surprisingly, these activities seemed to be still under development.

In sum, the European HEIs estimated the implementation of QA in their organisation as highly successful in most of the ESG standards except the one associated with monitoring and reviewing their programmes. This is in line with one previous finding of this study. It indicates that the vast majority of HEIs across the European countries (85%) have adopted QA systems and policies on institutional level rather than on programme level.

In regard to the results in table 5-3, it seems that some standards are well implemented (i.e. standard 8, 7, 6, and 4) in comparison to the others. By a closer look to the nature of these specific standards, it seems that HEIs showed better implementation for such managerial aspects that are relatively easy to administer and also for less challenging QA measures such as student services, learning resources, information management, and public information. However, HEIs still struggle with a couple of challenging aspects related to building QA systems and policies, developing curriculum, and enhancing teaching activities. Unsurprisingly, this is consistent with many previous research findings dealing with challenges and difficulties HEIs face in their quality efforts (e.g. De Vincenzi *et al.*, 2018; Cardoso *et al.*, 2016; Matei & Iwinska, 2016).

Considering the overall average of QA implementation, it seems that there is a variation between the European countries. Some countries (Netherlands, Lithuania, Estonia, Denmark and Latvia) have advanced farther in implementing the QA standards in their HEIs, while some countries (Italy, Kosovo, and the Czech Republic) have still more room for improvement in this respect.

5.7 CONCLUSIONS

The participating HEIs have composed their QA systems mainly according to national standards and traditions or based on the needs of the institution. Typically, the participating institutions have a specific unit for quality assurance, but each basic unit is responsible for improving the quality of their own processes and procedures. The results also show that the HEIs normally cover all their basic missions in the quality assurance system, but that the emphasis is on teaching and learning activities and on curriculum development.

As for stakeholders' involvement, it seems that external stakeholders play a lesser role than internal stakeholders with regard both to QA *policies* and in the *design of programmes*. Furthermore, among the internal stakeholders, *student involvement* scores are the lowest, even though student involvement has received considerable attention in the research field.

Considering the extent to which the participating institutions have implemented QA standards, we can see that institutions have *good management practices*, *publish relevant information*, and have *good resources plus support services for students*. Most room for improvement is in how the institutions *monitor and evaluate their programmes*, and in how well they have implemented the principles of *student-centred learning* within their programmes.

The results suggest a variety of ways of understanding the goals of QA (Martin & Stella, 2007; Lomas & Ursin, 2009; Prisăcariu, 2014) and carrying out QA in various institutional and country settings (Campbell & Rozsnyai, 2002; Ursin, 2007; Prisăcariu, 2014). The study demonstrates that different country settings do affect the implementation of QA standards. The study thus corroborates Kauko's (2014) and Nascimbeni's (2015) observations on the crucial role of the environment in which QA is implemented in different countries.

Regarding the comparison between the participating countries, the results further showed that northern European countries are at the forefront of QA implementation. Various factors might contribute to this effect; e.g. number of students, number of HEIs, economic prosperity, HE system, and political setting. None of these can be confirmed or refuted within the limited scope of our study. However, one possible explanation to differences between the countries is the level of compliance to the EU rules and regulations. Falkner & Treib (2008) grouped European countries into four groups based on their variation in terms of respecting, pick-and-choice, or neglecting rules and regulations enacted by the EU. The major difference between the groups is related to their degree of adherence to the original EU goals and policies (cf. Kohoutek *et al.*, 2018). To some extent, this results are in line with those of Falkner & Treib (2008) as Denmark, for example, came at the top ranking in both studies. Correspondingly, Italy and the Czech Republic are located at the opposite end of the spectrum, while Germany, Spain, and Austria are somewhere in the middle.

Bearing in mind that this study was limited to descriptive analysis, further insights might be obtained via an exploratory qualitative analysis. The scope of this study was also limited in terms of the number of countries included and the relatively small sample size due to the low response rate, as could be expected. However, the study brings forth significant aspects for further exploration. Various kinds of comparative analysis could be conducted; for example, comparisons based on the type, profile, or size of HEIs in order to check what other factors

might affect QA implementation. Furthermore, given the increased interest in quality matters internationally and the lack of cross-national studies in this field, there is a great need to investigate the challenges and other aspects associated with quality implementation on the European level.

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CHAPTER SIX:
THE FOURTH STUDY

"CHALLENGES OF IMPLEMENTING QUALITY IN EUROPEAN HIGHER EDUCATION: AN EXPERTS PERSPECTIVE"

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Challenges of Implementing Quality in European Higher Education: An Expert Perspective

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ABSTRACT

Embedding quality into higher education institutions (HEIs) is a challenging matter given the complexity of the higher education environment. Although several studies have been conducted seeking to reveal associated challenges, a limited number of researches implemented on a cross-national level. Therefore, the aim of this study is to investigate challenges associated with implementing quality in European HEIs as well as to explore the differences amongst them.

The methodology of this paper is based on qualitative analysis for 40 expert interviews coupled with employing 'triangulation of source' procedure to assure the reliability of the findings. Furthermore, the results are quantified in order to investigate the frequency of emerged challenges.

The findings of the study make several contributions not only to the literature, but also for European HEIs through identifying the current challenges and the variation between the countries. This will increase the limited knowledge in the area which contributes to overcoming such challenges.

Many challenges associated with quality in higher education (QHE) have been revealed. These challenges are discussed under three broad categories. They are (1) organization challenges which include quality system, educational system, and external stakeholders. (2) implementation challenges which include execution, competency, and funding challenges. (3) leadership which include quality culture and leadership features.

Keywords: Quality Challenges, Higher Education, Quality culture, Leadership, European Higher Education, Expert interview, Qualitative analysis.

6.1 QUALITY IN HIGHER EDUCATION

In the last decade, higher education intuitions (HEIs) have exhibited increasing interest in enhancing quality of higher education (HE) due to several political and economic reasons. It is widely accepted that quality is a successful system and of a high value in the industrial sector. However, their application and value to education were regarded a controversy by some scholars, resulting in a divide in the quality in higher education (QHE) literature where many questions remain open for discussion.

The proponents of adopting quality in higher education provide much evidence for their applicability to the HE environment in addition to their ability to enhance and develop several aspects within HEIs. Sallis (2002, p. 2) elaborates this through ‘ the message of quality’, explaining why educational institutions search for quality as a resource and key quest. Sallies further argues that quality distinguishes failure from success through enabling HEIs to achieve desirable outcomes, enter alia, outstanding academic staff, increased moral value, improved examination results, support of external stakeholders, abundance of resources, application of technology, strong leadership, enhanced student care, and development of challenging curricula.

In the same vein, Kanji *et al*. (1999) uncover more than 30 different reasons for implementing quality at HEIs, including continuous improvement, high level of services to external and internal customers, improving the organization and its processes, and increase efficiency and productivity. Additional reasons include organization productivity, student satisfaction, and staff morale are discussed by Owlia and Aspinwall (1997).

Another study mentioned that quality can be seen as an avenue of success for complex challenges such as expanding student numbers, improving services, enhancing market competition, and pursuing more efficiency (Green, 1994). Similarly, Brookes & Becket (2007)

demonstrated the importance of political, economic, and socio-cultural forces as drivers for quality implementation in HEI.

On the other hand, some opponents believe that HE quality is difficult to manage and faces many implementation obstacles. Other scholars went further to explicitly argue that some quality initiatives are a mere '*waste of time*' and are adapted from the industrial sector into higher education without considering the outright differences in the environment and nature of the two.

Becket and Brookes (2008, p. 40) raised the question 'what quality are we actually enhancing?', giving examples where the impact of quality initiatives is minimal. Likewise, Koch (2003) argued that quality initiatives such as total quality management (TQM) have an insignificant impact on educational institutions, arguing that TQM did not achieve the desirable success in critical higher education issues such as curriculum, tuition, and faculty tenure, and that if any success is to be attributed to TQM, it would be limited to non-academic activities such as registration and purchasing.

Over the last decade, however, the debate has changed and become increasingly in favour of quality in higher education, and researchers seem to focus more on managing quality and implementation success at HEIs rather than questioning the applicability of quality to the HE environment (e.g. Matei & Iwinska, 2016; De Vincenzi *et al.*, 2018; Salleh *et al.*, 2018). This what is called for by some researchers at an earlier time through 'focusing less on the label and paying more attention to the content' (Rosa *et al.*, 2012, p. 142).

This debate, however, has an impact on the European HE after the Bologna declaration and, more precisely, in the Berlin follow-up ministerial conference in 2003. The outcome was clear emphasis on the importance of implementing quality assurance (QA) in European higher education, culminating with the establishment of the European Higher Education Area (EHEA)

(Kecetep & Özkan, 2014). This has arguably sparked a change of focus in QHE research, in addition to the increased implementation of quality across European higher education institutions (cf. Rosa *et al.*, 2012).

However, the road to such implementation is paved with many challenges. According to Kecetep & Özkan (2014), implementing QA in European HEI's is still one of the unfinished aims of the Bologna declaration due to the lack of centralized implementation efforts at the European level and the individualized, unsystematic implementation of QA in each country.

Therefore, since a lot of attention and efforts are carried out by the European countries towards establishing European quality standards and guidelines, we argue for the need to identify shared challenges across the European countries in order to put things into perspective e.g. support the allocation of funding, increase co-operation, enhance learning and knowledge sharing, and design research projects for QHE purposes. Such cross-country analysis, therefore, deserves more research attention, especially given the scarcity of research investigating QHE challenges of higher education institutions in European level.

Accordingly, this paper seeks to identify the challenges associated with quality on a supra-national level from an expert perspective. Furthermore, this paper compares and contrasts the various European countries to better understand the widespread and generalizability of those challenges. These aims require a broad extensive and intensive knowledge of quality on different levels, and accordingly, this paper insisted to take into account the experts' perspectives on the following questions:

(I) What are the major challenges associated with applying quality in European higher education?

(II) To which extent do European countries differ in term of organizational quality challenges?

6.2 CHALLENGES FOR QUALITY IN HIGHER EDUCATION

Implementing quality in higher education has always been considered an important topic for HEIs and associated stakeholders, and by extension, researchers have become increasingly interested in such a topic. Therefore, a number of scholars addressed this theme seeking to figure out the challenges and how to overcome such ones (e.g. Cardoso *et al.*, 2016; Eggins, 2014; Trivellas *et al.*, 2012; Liukineviciene & Bilbokaite, 2011).

Chaston (1994) summarized challenges of universities considering TQM as lack of understanding of internal customer needs, lack of commitment to quality and its standards, failure of high-quality delivering services, ineffective communications to meet internal customer expectation, in addition to a mismatch between customer expectations and service quality perceptions. Similarly, Motwani and Kumar (1997) cited several concerns questioning whether TQM threatens HEI's individual autonomy and have the ability to promote radical changes for enhancing QHE. Sirvanci (2004) added further challenges in this regard including customer identification, leadership management, and organizational culture. On a similar note, Lomas (2004) considered the cost of change, transformative leadership, and the establishment of conductive of organizational culture.

On the other hand, other studies did not only discuss challenges of implementing quality initiatives at HEIs but also attempted to provide considerations for successful implementation. Horine and Hailey (1995), for instance, identified senior leadership management, organizational culture, training, faculty support, and faculty support as key considerations when implementing TQM in HEIs.

For a similar purpose, Liukineviciene and Bilbokaite's (2011) review shows that quality management system (QMS) implementation is limited due to poor HEI readiness for strict standards, lack of funding, slow redistribution, absence of established quality improvement

system, absence of adequate conditions for QMS implementation, lack of understanding of the responsibilities associated with quality implementation, the dearth of personnel experience in quality management, negative perceptions of QMS, and the variety of functions and activities in HEIs. Likewise, Land & Rattray (2014) stressed the importance of effective leadership, adequate staff resourcing, clarity of policies, communication and feedback, historical tradition, planning and managerial commitment, stakeholder resistance or non-engagement, staff training and development, and effective measurement.

Tarí & Dick (2016) also mentioned the necessity to determine the HE product, standards for customer requirement, teaching control, academic freedom and responsibilities of research, managerial responsibilities, staff empowerment for enablers improving quality. Likewise, Cardoso *et al.* (2016) categorised quality challenges in terms of culture (e.g. management, infrastructure, resources, services, internal QA mechanisms, and academic affairs), compliance (e.g. public funding, access, educational policies, external QA, and Bologna process) and consistency (e.g. in teaching and learning, research, and relations with society).

In sum, analysing literature reveals a couple of observation. First, some challenges are related to the understanding of quality in educational environment (cf. Schindler *et al.*, 2015; Becket & Brookes, 2008), while other challenges are associated with educational system components like academic staff, curriculum, and students (cf. Dick & Tarí, 2013; Saillard, 2011; Shah *et al.*, 2011). Some others are connected to external stakeholders such as government and labour market (cf. Ulewicz, 2017; Leisyte *et al.*, 2013). Other challenges are linked to leadership and its important role in implementing quality (cf. Bendermacher *et al.*, 2017; Trivellas *et al.*, 2012). Whereas some challenges associated with funding, resources, and training (cf. Tarí & Dick, 2016; Land & Rattray, 2014; Asiyai, 2013; Krause, 2012; Shah *et al.*, 2011).

Another observation is that, the majority of works have focused on the national level (e.g. Cardoso *et al.* (2016) in Portugal, Lomas (2004) in the United Kingdom, and Quintanilla (1999) in Spain), while some tended to narrow the scope down to certain initiatives like TQM (e.g. Sirvanci, 2004; Meirovich & Romar, 2006) or aspects of quality implementation such leadership and quality culture (e.g. Trivellas *et al.*, 2012; Dhillon, 2001). Nevertheless, discussing such challenges on a cross-country level, or more specifically a European level, is quite limited. Therefore, this study attempts to bridge this gap.

Considering the first observation, the analysis of quality challenges in this paper will be based on eight different themes, namely 'Quality System', 'Educational System', 'External Stakeholders', 'Execution', 'Competency', 'Funding', 'Leadership Responsibility & support, and 'Quality Culture'. These themes are categorised into three main umbrella categories, namely 'implementation challenges', 'organization challenges', and 'leadership' (See figure 6-1). These three key categories are adapted from the Blase *et al.*'s (2012) research on implementation drivers.

Figure 6- 1: Quality challenges in the higher education. Adapted from Blase *et al.* (2012).

6.3 METHODOLOGY AND SAMPLE DESIGN:

6.3.1 RESEARCH METHOD

To investigate the challenges and barriers of implementing quality at the European higher education and highlights possible mitigations to such challenges, in-depth expert interviews were conducted and analysed across several European countries.

Expert interviews recently became a widely-used research method in many different fields of study especially in organizational and educational research (Meuser & Nagel, 1991). Bogner *et al.* (2009) argued that the expert interview methodology is an efficient and concentrated method for exploratory data collection that can grasp high-quality data especially when experts are considered as the 'crystallization point' for deep knowledge.

A semi-structured design for expert interviews was considered the most appropriate method for this study, as it provides the interviewees adequate time and scope to express diverse viewpoints, allows comparison of interview results, enable the interviewer to handle emerging questions, and provides the chance to evaluate the validity of the participants answers (Nohl, 2012; Barriball & While, 1994).

The research design also took into consideration the 'Triangulation of Source' as a practice to obtain a valid and comprehensive view. Patton (1999) defined data triangulation as a way of examining the consistency of various data sources within the same method. The scholar further mentioned its importance and usability to compare perspectives from several points of view. Therefore, the sample design considers interviewing experts from HEIs, researchers in the field, and national accreditation agencies. Furthermore, experts from European QHE organizations like EQAA (*European Quality Assurance Agency*) and EUA (*European Universities Association*) have been interviewed as they have a broader insight to quality on the cross-national level (see figure 6-2).

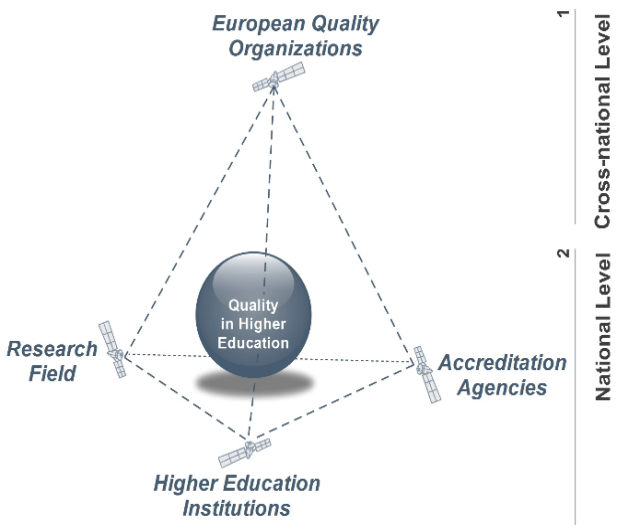

Figure 6- 2: Triangulation of source in the present study.

6.3.2 INTERVIEW DESIGN AND PROCESSES

Considering Creswell's steps (2014), the interview protocol consists of (1) a preparatory section that contains an introduction and summary of research aims, (2) questions that investigated the background and experience of the interviewees, and (3) open-ended questions designed according to existing associated literature (back to figure 6-1).

Due to the dispersion of experts throughout Europe, a small number of interviews were conducted face-to-face whereas the majority were conducted online, given that, several studies confirm that data quality is comparable whether interviews are done personally or by telephone (cf. Rogers, 1976). The 40 interviews were accomplished throughout a period of five months, each lasting between 45 to 60 minutes, yielding a transcript of 300 pages for analysis. Each interview was immediately transcribed coded and analysed considering Marshall and Rossman (2011) and Merriam (1998), who argued that data analysis and collection in qualitative research should be done simultaneously.

6.3.3 SAMPLE DESIGN

The sampling strategy in this research is quite complicated since selecting process should include steps relied on several factors, such as country, organization type, and years of

experience. Therefore, the selection process started by selecting the counties, then organizations and experts.

1. **Countries selection**: Countries included in the sample are Germany, Spain, Finland, Poland, the Czech Republic, and Austria. They were chosen through clustering EU countries into three groups based on the ranking value of both higher education system rankings (QS) and ranking for national higher education system (U21). Next, two countries from each group were randomly selected.

2. **Organizations selection:**

   Higher Education Institutions are included for each sample unit (selected countries). A sample of three to five HEIs has been randomly selected contacting their potential expert e.g. (vice-rector for quality, quality department director, or quality representative). The sample overlooked the differences between HEIs profiles such as being private or public, small or large, and specialized or comprehensive. Nevertheless, the overall sample included examples covering various HEI types in this spectrum.

   Accreditation Agencies are also included due to extended experience and knowledge in quality challenges confronting the national HEIs, which is accumulated through the auditing visits over years. EU-countries normally have only one national accreditation agency except for such countries like Germany, Spain, Belgium, and France. Based on that, only one expert from each national accreditation agency of nominated countries is selected and two experts in the case of Germany and Spain.

   Research Field is also involved where experts from the QHE have been selected from either a research project for quality, a research centre for higher education studies, or based on number of relevant publications.

European Organizations for Quality are added to the sample as an additional layer to include a broader cross-national perspective. Therefore, several European organizations working in this domain have been randomly selected.

3. **Experts selection:** Meuser & Nagel (1991) define an expert as a person 'who is responsible in some way or another for the development, implementation or monitoring of a problem or who has privileged access to information about people or decision processes' (1991, p. 443). Based on that, experts were selected based on long-standing experience, leading position, and extensive knowledge in the field of QHE. Therefore, among the interviewees are vice-rectors, secretaries-general, quality directors, in addition to leader for quality project and research.

The total sample contained 40 experts across six countries and different types of organizations on national and European level (see table 6-1).

Table 6- 1: number of conducted interviews for each country

Country	HEIs	Accreditation agency	Research Field	Total
Germany	4	2	1	**7**
Finland	3	1	1	**5**
Spain	3	2	2	**7**
Poland	4	1	1	**6**
Czech Republic	3	*	1	**4**
Austria	5	1	1	**6**
Total:	22	7	7	**36**
European quality organizations (4)				**Overall (40)**

*** The Czech Republic accreditation agency is newly re-established.**

6.3.4 VALIDITY AND RELIABILITY

According to Patton (1999), triangulation of data sources is a powerful tool for validating information where data is collected from several points of views. Mayring (2007) considered it as one among other pathways to generalize and have reliable results in qualitative analysis. This has been confirmed by Bryman (2012) and Vidovic (2003) who explain why checking

different perspectives in research can enhance reliability and validity. Moreover, it provides a clearer understanding of the research problem and uncovers unique results (Thurmond, 2001).

This study follows the suggestions of Gibbs (2007) and Yin (2009) (as cited in Creswell, 2014, P. 203) for qualitative reliability procedures. Therefore, several steps have been taken into account to ensure the consistency and stability of the study processes are ensured, such as inspecting transcriptions, defining codes, and documenting the analysis procedures.

As an additional validation step, three relevant researchers reviewed the protocol before the interview phase in order to check the appropriateness of the interview questions. Moreover, a pilot-test was conducted twice with the aim of checking whether the interview time frame is realistic and whether different participants would understand interview questions in a similar manner.

For the purpose of coding scheme verification, intercoder reliability method (also called the intercoder agreement) is applied to ensure that other coders replicate the same way of coding following the same instructions (Carey *et al.*, 1996). It refers to the degree of agreement of different coders on the same interviews' responses, which is considered a critical component for the analysis and the interpretation of the content (Lavrakas, 2008). Therefore, two independent researchers coded two interviews using the same code scheme. The coefficient Kappa values ranged between (.90-.94) which shows, according to Neuendorf (2016), a high level of agreement among different coders.

6.3.5 DATA ANALYSIS AND INTERPRETATION:

Considering Saillard's (2011) study, qualitative data analysis software was used to code and analyse the data. Figure 6-3 illustrates the analysis procedure which is adapted from the six steps of Creswell (2014). Firstly, data was prepared and organized for analysis. Then, data was skimmed to generate a broad sense of overall meaning. Next, the coding process was initiated which consisted of organizing the transcriptions, bracketing the paragraphs and sentences,

clustering topics, and providing adequate terms and labels (cf. Tesch, 1990). After that, themes were interlinked and outcomes were evolved into conclusions which were interpreted and presented.

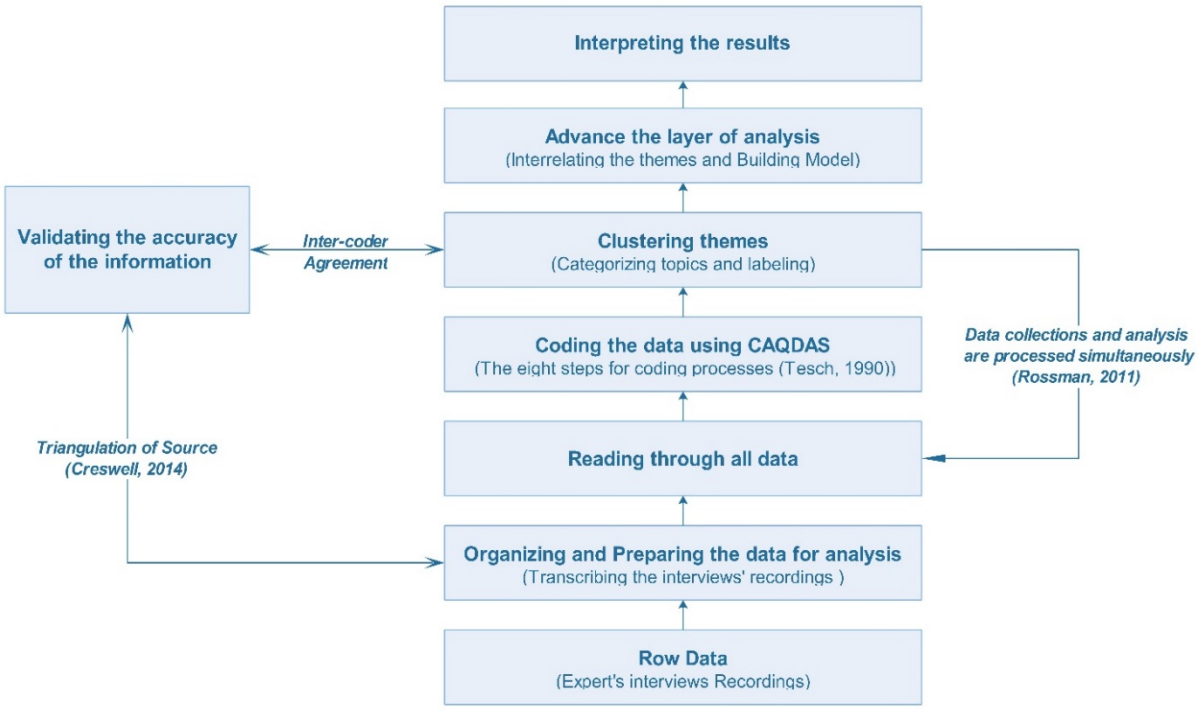

Figure 6- 3: Data Analysis Procedure for the interviews – developed from (Creswell, 2014).

As this study commits to the confidentiality preference of the interviewed experts, overall experts' insights are summarized then comprehensively elaborated without using direct expert quotations. Instead, we will cluster them in into themes and categories as illustrated previously in figure 6-1. Furthermore, we will quantify the resulted challenges following conventional content analysis in order to compare the emerged themes within each category as well as comparing the countries (cf. Hsieh & Shannon, 2005; Michelene, 1997).

6.4 RESULTS AND FINDINGS

The results of this research will be presented, at first, at the general level exploring the main themes of identified challenges, focusing therefore on common challenges among European countries. Second, the analysis will be narrowed down to discuss in detail the challenges within each theme and group that has been revealed throughout the interviews. Finally, a comparison

between the countries will be demonstrated to investigate the similarities and differences among one other.

In order to have a more comprehensive overview of the challenges facing European HEIs, the challenges will be classified qualitatively and illustrated quantitively (see figure 6-4).

Regarding organizational challenges, most discussed challenges fall in the areas of educational system components, then external stakeholder challenges, and finally quality management (QM) challenges. With respect to the educational system, academic staff and student challenges are most discussed in comparison with others in the same theme, followed by organizational management and administrative staff, resources and services, and curriculum. Whereas challenges pertaining to research, and graduates' skills are to some extent less discussed.

Figure 6- 4: The frequency of themes (codes count) discussed by the experts

Concerning QM challenges, those related to quality definitions and models grab more expert attention than the variety of stakeholders and the complexity of HE environment. However, only a few experts deliberated challenges connected to measuring and assessing quality. Experts also stress on labour market, government regulation, and accreditation agencies as higher challenge areas than society and alumina challenges.

In the same line, the experts mentioned several challenges associated with the execution phase on quality system implementation particularly to the importance of funding and competency to achieve quality. Furthermore, they discussed the importance of leadership and its vital role in implementing quality. They further explained the responsibilities of leaders in building a quality culture as well as for supporting QHE. They emphasized the importance of equipping leaders with both adaptive and technical skills for successful quality implementation.

6.4.1 ORGANIZATIONAL CHALLENGES

Table 6-2 summarizes the main organizational challenges related to quality in European HE. It demonstrates the challenges within each theme as well as the number of times that each group of challenges was approached by the experts.

Table 6- 2: Qualitative and quantitative analysis of the challenges of quality in European higher education.

Theme	Group	N (%)	Qualitative Challenges
Quality Management	Quality definitions and models	26 (8.7%)	No commonly accepted notion for quality in higher education Several meanings and understandings based on different stakeholders Vague term to observe and communicate Several models for quality management
	Stakeholders' diversity	17 (5.7%)	Variety of internal stakeholders Different external stakeholders Different perspectives, interests and requirements for each of stakeholders
	Complexity of HEI environment	12 (4%)	HEIs are multipurpose institutions Academic staff autonomy HEIs are multi-culture organizations Misusing quality as a tool for accountability or to fulfil external requirements
	Measuring quality	4 (1.3%)	Finding the appropriate tools for evaluation Implementing adequate measurements Assessing Quality by both qualitative and quantitative methods

Educational System	Academic staff	50 (16.7%)	Reluctance of academics Lack of training Overload work Academics freedom and autonomy Rapidly changing rules and regulations Financial issues Academics motivation and awards
	Student	31 (10.3%)	Student qualifications and diversity Numbers of students Lack of interest Student involvement
	Organizational Management & Administration staff	20 (6.7%)	Improving operational processes Demand on follow-up action Gain trust from internal stakeholders Lack of experience for QHE-related topics Communication channels Needs for training on different level
	Resources and services	17 (5.7%)	Lack of financial resources
	Curriculum	14 (4.7%)	Universities are more research-oriented Continuously changing environments Rapidly changing demands of the labour market
	Research	9 (3%)	Providing indicators and standards Enhancing research quality Research quality control
	Graduate skills and knowledge	9 (3%)	Lack of measurements Economic and social benefit indicators
External Stakeholders	Government	28 (9.3%)	Link the state's subsidies with quality indicators Governments enact inappropriate legislations Using quality as a tool for accountability Continuous changing of rules and regulations
	Labour Market	24 (8%)	Engaging the labour market with quality systems Finding appropriate representatives for labour markets Different perspective from labour market Focus on short-term skills
	Accreditation agency	22 (7.3%)	Auditing processes only for inspection Additional pressure on the education system Contains too much bureaucracy Forces HEIs to allocate much time and effort No added value out of it
	Alumni and Society	17 (5.7%)	Lack of connection, participation, and engagement of alumni and society

6.4.1.1 QUALITY MANAGEMENT CHALLENGES:

Experts, in QM group, identified several challenges that HEIs confront when adopting a quality to HE system. First, they mentioned that the existence of a variety of quality definitions and models leads to confusion and limits successful implementation of quality.

The reasons behind this include that there is no commonly accepted notion for QHE, quality being a multidimensional concept that has several meanings and could be interpreted in different ways, the vagueness of the terminology communicated to external and internal stakeholders, and the existence of many concepts, approaches, and initiatives with similar or overlapped meanings. Seeing a lack of common denominator among the different interpretations of the expression ‘Quality in Higher Education’, experts find quality difficult to

define, and therefore challenging the implementation. Unsurprisingly, many of those discussions go in line with other studies where several scholars focus on the variety of QHE definition (e.g. Schindler *et al.*, 2015; Seymour, 1993).

However, experts further explained that we still know a little about quality in HE and what it really means, therefore, there is a real need for more research in the field. Others mention that, regardless of having several interpretations for the same concept, quality is still a broadly accepted term, and therefore there is no need to consider quality definition as a key issue. Another opinion went further in explaining that overcoming this issue is not such an important matter, and on the contrary, it might bring some benefits through providing several perspectives on what QHE ought to be. This allows HEIs to pragmatically provide their own interpretation that goes in line with their goals, plans, and stakeholder requirements

Additionally, experts focus on the variety of external and internal stakeholders as one of the issues in European HEIs, consistent with other works (e.g. Ulewicz, 2017; Becket & Brookes, 2008). However, they further explain in this context that differences in perspectives of quality do not only vary among internal and external stakeholders, but also vary within the same stakeholder level. In other words, academic members from different faculties or backgrounds might understand the concept of QHE differently. One, for instance, might perceive quality as standards and indicators to be achieved whereas another sees it as a concept for desired development and improvement.

The interviewees also expressed that bringing institutional stakeholders together to agree on educational quality outputs is undoubtedly an important though a complex issue. This is further exacerbated when an institution attempts to expand its concept of quality from a mere measurement tool into a quality culture, potentially burdening some stakeholders with additional daily tasks.

Third group of challenges is related to the complexity of educational organizations. Although some scholars refer to the complexity of HE environment and research field of quality (cf. Alzafari & Perner, 2018; Alzafari, 2017; Altbach, 2014), experts added several more aspects associated with this regard explaining that:

- HEIs are multipurpose organizations and stand for different activities such as teaching and learning, research, and what is called third mission.
- The variety of HEIs' stakeholders (i.e. students, academic and administrative staff, senior management).
- HEIs are introducing quality management systems as tools to fulfil external requirements imposed by external educational authorities. This leads not only to a bureaucratically-burdened management system, but also to many defective and effective educational activities.
- The high level of academic staff autonomy makes it even more challenging to enact policies, rules, and legislation supporting QMS implementation.
- Multi-cultures within the same organization.

Finally, only a few experts refer to finding adequate measurements and tools to assess quality as a challenge for implementing quality. They elaborate that the lack of understanding of quality and its expected benefits make it difficult to be measured. Furthermore, there are shortcomings in using the appropriate measurement to assess quality. For instance, HEIs tend to rely on quantitative methods for assessing some indicators. However, not all agreed with using quantitative surveys as tools to measure performance.

6.4.1.2 EDUCATIONAL SYSTEM CHALLENGES:

Experts discuss the challenges associated with the educational system components. The top three groups that are discussed heavily by the experts are academic staff (16.7%), students (10.3%), as well as organizational management and administration staff (6.7%). Whereas, the less discussed themes are research and graduate skills with (3%) for each. The respondents provide several challenges associated with each of the educational systems:

Academic staff: The experts focused on several challenges associated with academic staff. One of the biggest challenges is the reluctance of academics towards quality implementation. Some experts think that this resistance has decreased over the last few years and most scepticism revolves around bureaucratic processes, procedures, and policies of implementing quality rather than quality value itself. This could be further aggravated when coupled with other problems such as lack of training on quality systems, lack of involvement in designing and planning quality implementation phases which lower the sense of process ownership, and the work overload of academics between teaching and research.

Furthermore, experts underscored that the autonomy of academics in teaching and research activities as one of the key challenges linked to academics. Nevertheless, they emphasized the importance of finding a balance among autonomy, engagement in quality improvement, and teaching methods.

In some cases, other challenges appeared in some countries like rapid changes in rules and regulations related to quality and accreditation systems, financial problems, and others related to award systems, where many university policies focus on academic output based on research projects and number of publications rather than excellence and innovation in teaching and pedagogy. Therefore, academics seem to put more effort into research than teaching activities.

Students: Several student-related challenges are mentioned by the interviewees. They considered, however, student qualifications as one of the key challenges. As many HEIs are government-funded, they do not have the legal authority to select qualified students or even to apply entrance exams. That implies the acceptance of massive numbers of students to study programmes, which challenges the adoption of student-centred learning concept and using summative rather than formative assessment methods.

Some experts mentioned that on the one hand there is a lack of interest in teaching and learning evaluation and feedback processes. On the other hand, there is a need for higher student involvement in quality planning and implementation.

Organizational management and Administration staff: Experts who argue that organizational management also faces challenges focused on the need for enhancing operational processes in the institutions aiming to increase the quality of services. Additionally, they mention the demand for follow-up actions as a necessary step to gain trust in quality implementation. Indeed, in some cases, after data was collected for the purpose of continues improvement, no follow-up actions were taken, hence education stakeholders lost their interest in quality of education.

Most of the experts did not recognize administration staff as a major challenge associated with quality implementation in higher education. However, a common belief is that administration staff has an impact not only on teaching and learning processes but also on developing study programmes. Therefore, in order to develop a quality system, additional training and communication channels should be provided. An expert explained further that lack of experience of people who deal with quality could be a key staff challenge, mainly due to the newness and complexity of quality in higher education. Furthermore, this challenge might even exist among staff within quality units, where most of the gained experiences have been developed based on self-reliance.

Curriculum: Designing curricula is one thorny subject when it comes to quality implementation, as higher education systems across Europe rely on scheme-based study programs with knowledge, skills and competencies aiming to increase the ratio of employability. However, this matter is connected to the HEI's profile. Some institutions focus on research and rely primarily on it to receive additional funds. Whereas other institutions

strongly focus on the application of scientific knowledge, offering their students application-oriented courses that equip students for the labour market.

Some experts believe in providing students with the most updated study programs that take into consideration the rapidly changing demands of the labour market considering that we live in an era of highly competitive education environments. Furthermore, HEIs are characterized by continuously changing environments by nature, and thus, should be adaptive to the environment. On the other hand, others think that the main aim of universities is research, to receive the label of knowledge producers, then in the second place come teaching and learning. Consequently, universities do not seem to have the desire to change curricula based on market vision. On the contrary, they hold the responsibility against the students themselves and labour market for training them to step to their career path.

Resources: Many experts think that financial resources are fundamental to successful quality systems to support teaching, learning, and research activities as well as additional staff training and the development of the quality system. Moreover, this challenge becomes more critical in some countries that experienced particular economic challenges.

Research: A few experts mention challenges related to research in the educational system, mainly pertaining to providing indicators and standards and enhancing research quality and its impact on the individual and social level. The reasons behind these challenges might be that such indicators are not only difficult to measure but also, in many cases, are connected to funding organizations and their own requirements.

Graduate skills and knowledge: Experts, who focus on the perspective of educational outcome, referred to the lack of graduate skills and knowledge measurements as main challenge. Additionally, there is a need for economic and social benefit indicators, as higher

education institutions have the responsibility for innovative, enterprise and social activities (the third mission of universities) alongside teaching and research.

6.4.1.3 EXTERNAL STAKEHOLDER CHALLENGES:

According to Amaral and Magalhães (2002), external stakeholders are individuals or groups that have an interest in HE even though they might be outside of the educational community. Stakeholder roles and interests are focus of attention for many scholars in the field (e.g. Pinheiro, 2015; Balbachevsky, 2015) as they have a great influence on HEI functions and effectiveness (Ulewicz, 2017) and more importantly on curriculum and programme design (Leisyte *et al.*, 2013). Nevertheless, several challenges associated with stakeholders and their roles exist at HEIs.

The experts identified several external stakeholders' challenges related to government, society, labour market, alumni, and HE agencies. Back to table 6-2 for external stakeholders' comparison, it seems that government challenges come in the first place (9.3%) followed by labour market and accreditation agencies related challenges (8% and 7.3%, respectively) then alumni and society ones (5,7%).

Government: Experts mentioned a couple of challenges associated with governmental practices toward public universities. Some countries, for instance, link the state's subsidies with quality indicators. In fact, connecting the funding model with quality standards might have positive implications, which help in improvement and development. Nevertheless, many examples were revealed where governments enact inappropriate legislation, which might not correspond with educational system autonomy. Additionally, lack of experience in HE management might lead to additional obstacles in term of quality implementation. In this regard, interviewees cited a couple of issues that pose major challenges, among which using quality as a tool for accountability rather than for improvement and continuous changing of rules and regulations, making it difficult for some stakeholders to accept quality.

Labour Market: Although the experts evoked the importance of labour market feedback, a number of associated challenges are addressed in this subject. Most interviewees explained the value of labour market engagement as a key information source about graduate's performance as well as essential support for developing study programmes. However, higher education institutions still find engaging the labour market with quality systems a challenging topic. This is often due to the difficulty in finding appropriate representatives for labour markets that have the motivation and interest to participate. Additionally, representatives often have different perspectives based on their own interests. Furthermore, many voices inside the educational institutions are still against the involvement arguing that labour market always focuses more on short-term skills rather than sustainable knowledge.

Accreditation Agency: Many experts value accreditation processes as a necessary step to meet the minimum requirements and national standards for education quality. However, research and HEI experts observed many obstacles on part of accreditation agencies that might impede quality implementation processes. They implied that some internal stakeholders view them as auditing processes only for inspection purposes, whereas they should comprise collaborative enhancement and improvement. Moreover, it has been described as additional pressure on the education system, which contains too much bureaucracy that forces HEIs to allocate much time and effort for just a monitoring report. Therefore, some academics still see no added value for the education system.

Alumni and Society: Most experts mentioned the importance of graduates as a valuable source of information for development. However, they are not playing a key role at HEIs due to the lack of connection, participation, and engagement of alumni. Additionally, a few experts also discussed the need for community development and how to engage and communicate with the civil society.

6.4.2 IMPLEMENTATION CHALLENGES:

During the stage of embedding quality to an educational system, its goals, and its strategic plan, HEIs may confront many challenges related to executing processes. In some cases, higher education institutions, especially those which started with quality initiatives years ago, overcome some of the challenges. However, many HEIs are still in the phase of implementation or even preparation.

Table 6-3 summarize the results of the implementation challenges. It shows that funding is an important matter for any organisation to start implementing quality. Furthermore, training and coaching, especially at the early stages of implementation, are of high importance.

Table 6- 3: implementation challenges at HEIs.

Category	N (%)	Qualitative Challenges
Executing	62 (38.3%)	Explaining quality Data-driven decision-making Developing implementation action plans Limited resources Internal stakeholders' resistance Lack of experience understanding the organization culture Lack of engagement Senior management commitment
Funding	38 (23.5%)	Funding allocation and financial support
Competency	62 (38.3%)	Training and coaching

6.4.2.1 EXECUTION PHASE

This section discusses the challenges associated with execution stage where HEIs start planning for quality implementation.

The experts in the present study emphasized that explaining quality is a vital issue mainly when quality is newly introduced to HEIs. Therefore, many discussions related to what quality is and its potential benefits at different levels should be held.

Additionally, data-driven decision-making is also considered one of the key challenges facing educational institutions. Feedback data, experts further explained, is a fundamental

matter for quality. Although HEIs often gather feedback appropriately, the real challenge lies in employing the results for making the right decisions.

Developing implementation action plans, where not only implementation steps but also roles and responsibilities are clarified, is another challenge. In some cases, this might be coupled with other challenges such as limited resources, internal stakeholders' resistance, and lack of experience. Therefore, it should be taken into consideration that quality planning required enhancing stakeholders' engagement as well as further understanding of HEI culture.

6.4.2.2 FUNDING

The second issue raised by the experts is funding allocation and financial support, which is not only for educational services but also for quality implementation, enhancement, and sustainability.

6.4.2.3 COMPETENCY

Competency seems to be one of the important factors for embedding quality, and most experts focus on staff training, coaching, development and empowerment for improving quality. The interviewees recommend different kinds of training courses for students, administration and academic staff in quality tools, quality control, evaluation management, lifelong learning, and quality assurance. Others value courses related to personal skills such as communication skills, professional development, organizational skills, change management, and research and analytical skills. Alternatives such as consulting services, peer quality-manager meetings or consortiums, sharing knowledge using joint cooperative projects, and software for analysis, decision-making, and for managing quality have also been recommended by several experts.

6.4.3 LEADERSHIP AND QUALITY CULTURE:

Leadership is one of the key pillars for quality in higher education. The role of the leader is not only limited to managing the implementation processes, but also extends to other roles such as supporting development, managing change, and building a quality culture. Leadership is

perceived by the experts as one of the vital contributors for quality implementation in higher education system. Therefore, the experts highlighted several responsibilities and characteristics that any leader should have for successful implementation.

According to the Heifetz *et al.* (2009), leadership can be categorised two groups 'Adaptive Leadership' and 'Technical Leadership'. The former considers the practical skills and technical knowledge needed to carry out the implementation successfully, whereas the latter focuses more on the process of change rather than personal capability. Therefore, the results will follow this categorisation to assess the extent of their importance for the higher education environment.

Table 6-4 summarises the key characteristics of leaders to support building quality and embedding quality culture at HEIs. Experts highlighted several competencies and skills for quality leaders, including influencing people and processes, creating trust atmosphere and shared understanding, performing several roles, allocating resources, and communicating and developing policies for continuous improvement. Moreover, the experts should be able to involve all stakeholders to entrench the principle of 'collective responsibility', understand the diversity within an organization to adopt changes, reduce bureaucracy and moving towards lean quality systems, and create a transparent environment based on discussion, engagement, and persuasion.

The interviewees discussed the relationship between leadership and quality culture. A few voices argued that quality culture is ambiguously defined and has no clear measurements yet thus there is no real understanding of quality culture. The clear majority of experts, however, stressed the importance of supporting quality culture in educational environments. Moreover, the experts provide several points that aim to help in building quality culture at HEIs where quality can be turned from a mundane task to a daily habit. Those points include promoting

and marketing quality and its value for organisations, leading by example and sharing good practices, using discussion and persuasion as communication methods to building trust and transparency, and encouraging and involving various stakeholders into all quality activities.

Table 6- 4: Quality culture and leadership characteristics.

Category		N (%)	Qualitative insights
Quality Culture		82 (53.9%)	Promoting quality and stressing on its benefits through discussing and convincing Trust, Communication and Transparency Stakeholders involvement, encouragement and engagement
Leadership characteristics	***Adaptive***	35 (2.3%)	Encouraging and motivate people Top management commitment Embedding quality to strategic plan Balancing different interests Build culture and promote quality Translator from external to internal Change management skills
	Technical	35 (23%)	Convincing Policy Personal and managerial skills Providing resources Communications Quality experience and personal development Training Approach Organizational knowledge Building a trained team

Undoubtedly, implementing quality in higher education is a long and hard journey accompanied by obstacles. However, the experts provide many suggestions that support conducting a successful quality system, including:

- Connecting quality implementation to strategic institutional planning
- Involving senior management in implementation processes
- Leading the change through trained quality managers who can facilitate and simplify tasks according to stakeholder language and mindset
- Avoiding bureaucracy, complexity, and reducing workload
- Promoting benefits of quality and continuously remind others of what has already improved
- Providing adequate resources including funding, training, consulting, and expertise
- Maintaining autonomy and process ownership of the academic staff
- Balancing internal and external stakeholders' interests
- Relying on communication, discussion, and persuasion as key for quality implementation
- Involving and cooperating effectively with all stakeholders.

6.5 COUNTRY COMPARATIVE ANALYSIS

In order to compare the countries, we focus on the frequency of challenges at the country level rather than on the theme level as we have a different number of interviews for each country (see table 6-5). The overall results explore that there are several challenges that are common to most countries with a small variation between the countries, for example, challenges related to quality definition, government and academic staff. However, some challenges seem to more prominently prevail in some countries compared to others such as ones related to quality measurement, HE environment complexity, accreditation agency and research. It worth mentioning that not addressing any challenges in a certain theme for a certain country does not necessarily indicate absence of such challenges, rather that such challenges are not major obstacles at the time.

Regarding quality management challenges, experts from Germany, Austria, and the Czech Republic expressed more challenges in comparison to other countries like Finland or Spain. However, Germany and the Czech Republic have more challenges associated with quality measurements and definitions in comparison to their peers, such as Spain.

Discussing educational system associated challenges, it seems that all countries illustrated many challenges, though mostly in Finland especially in areas of organizational management, administrative staff, and research. However, other countries highlighted more challenges in different themes. For example, Spain struggles more in academic staff and resource challenges, the Czech Republic in students, and Austria in Curriculum.

Concerning external stakeholders, Spain exhibited more challenges than other countries in the society and alumni, labour market, and government areas. On the other hand, Finland does not only have the least challenges in this theme, but also none of the experts mentioned any challenge with their accreditation agency which gives a positive impression from the experts'

perspective, in contrast to the Czech Republic which has the highest number of challenges in this theme. As for Poland, most challenges pertain to the labour market.

Table 6- 5: Comparing quality challenges amongst European countries.

Themes	Finland	Germany	Austria	Czech Republic	Spain	Poland	Total
QM challenges	**7** **15.9%**	**16** **23.9%**	**9** **24.3%**	**6** **20.0%**	**5** **10.0%**	**8** **16.3%**	**51** **18.4%**
Environment Complexity	2 4.5%	4 6.0%	3 8.1%	-	-	1 2.0%	**10** **3.6%**
Quality Definition	3 6.8%	6 9.0%	3 8.1%	3 10.0%	5 10.0%	4 8.2%	**24** **8.7%**
Various Stakeholders	2 4.5%	4 6.0%	3 8.1%	1 3.3%	-	3 6.1%	**13** **4.7%**
Quality measurements	-	2 3.0%	-	2 6.7%	-	-	**4** **1.4%**
Educational system	**28** **63.6%**	**32** **47.8%**	**17** **45.9%**	**15** **50.0%**	**26** **52.0%**	**24** **49.0%**	**142** **51.3%**
Academic staff	8 18.2%	12 17.9%	4 10.8%	4 13.3%	14 28.0%	6 12.2%	**48** **17.3%**
Student	4 9.1%	5 7.5%	5 13.5%	5 16.7%	3 6.0%	6 12.2%	**28** **10.1%**
Organizational manage. & Admin. staff	6 13.6%	3 4.5%	2 5.4%	2 6.7%	1 2.0%	4 8.2%	**18** **6.5%**
Curriculum	2 4.5%	2 3.0%	4 10.8%	2 6.7%	1 2.0%	2 4.1%	**13** **4.7%**
Research	4 9.1%	2 3.0%	1 2.7%	-	-	2 4.1%	**9** **3.2%**
Resources and services	2 4.5%	5 7.5%	-	2 6.7%	5 10.0%	3 6.1%	**17** **6.1%**
Graduate Skills	2 4.5%	3 4.5%	1 2.7%	-	2 4.0%	1 2.0%	**9** **3.2%**
External Stakeholders	**9** **20.5%**	**19** **28.4%**	**11** **29.7%**	**9** **30.0%**	**19** **38.0%**	**17** **34.7%**	**84** **30.3%**
Government	3 6.8%	5 7.5%	8 21.6%	1 3.3%	6 12.0%	4 8.2%	**27** **9.7%**
Labour Market	2 4.5%	6 9.0%	1 2.7%	1 3.3%	5 10.0%	7 14.3%	**22** **7.9%**
Society and Alumni	4 9.1%	3 4.5%	1 2.7%	1 3.3%	4 8.0%	3 6.1%	**16** **5.8%**
Accreditation Agency	-	5 7.5%	1 2.7%	6 20.0%	4 8.0%	3 6.1%	**19** **6.9%**
∑ Sum	44	67	37	30	50	49	277
% Percentage	100 %	100 %	100 %	100 %	100 %	100 %	100 %
N Interviews	5	7	7	4	7	6	36

6.6 CONCLUSION

The main aim of this research is to investigate what QHE experts perceive as key challenges associated with quality in European higher education in a cross-country, comparative manner. Experts from different experience backgrounds (i.e. HEIs, Accreditation agencies, research, and European QA bodies) identified several challenges facing European higher education institutions concerning implementing quality. They discussed different kinds of challenges related to organization and implementation as well as addressed the importance of leadership and its roles for building quality culture.

The results of the present study did not only provide insights into the most recent emerging challenges for adapting quality in HEIs, but also attempted to expand and reprioritise previous knowledge. Thus, some aforementioned challenges in the literature are overlooked by experts whereas, many others are highlighted by them. As a case in point, challenges associated with the variety of quality definitions and models are frequently discussed in previous studies (e.g. Ryan, 2015; Becket & Brookes, 2008; Brookes & Becket, 2007; Seymour, 1993). This suggests that such challenges appeared decades ago yet HEIs still struggle with them, even though there is more consistency in QHE definition over the last couple of decades (Schindler *et al.*, 2015). Likewise, the different interests and requirements of internal and external stakeholders is also a challenge where it has been discussed in the literature (e.g. Schindler *et al.*, 2015; Becket & Brookes, 2008) and has confirmed by the experts.

On the other hand, a couple of challenges that have been addressed in the previous studies, have not been considered dominant by experts. For instance, previous studies conducted by Horine and Hailey (1995) and Seymour (1993) indicated that lack of time is one of the challenges comforting the HEIs for adapting a quality initiative within educational organizations. However, such a challenge was not mentioned by the experts. In the same vein,

measuring and assessing quality is one of the topics that was frequently addressed in previous studies (e.g. Land & Rattray, 2014; Bilen, 2010). However, only a few experts refer to it as a challenge.

Regarding the countries comparison, the results show that the number of similarities are much higher than the difference between the countries. Several challenges appear consistently across countries such as those related to academic staff, students, government and quality definitions. Such challenges concern the nature of higher education and employing quality as a system for managing HEIs, hence they are expected to appear in most of the countries with some variation. On the other hand, a few challenges show clear differences between the countries such as curricula, research, and accreditation agency presumably as they highly correlate with HE regulation, accreditation system, or even type of institution, which differ across countries.

Accordingly, different strategies and measures should be considered to mitigate the challenges. The experts come up with vital suggestions that help in overcoming many challenges especially those related educational system, competency, leadership and quality culture. However, other challenges which are discussed particularly in QM theme need more in-depth research to be exceeded as they are related to our understanding of QHE meaning and to the nature of the educational environment.

Furthermore, the apparent lack of experience of individuals working in this domain calls for relevant training and coaching. Therefore, it would be appropriate to consider establishing professional training programs for managing quality in HEIs focusing on expanding knowledge in quality concepts, HE environments, governmental regulation, accreditation systems, managerial competencies and technical and adaptive leadership skills.

Additionally, given the overlap of challenges across various HEIs, there is an opportunity to increase collaboration and exchange knowledge between European HEIs attempting to overcome common challenges. This could be achieved through establishing collaborative projects and enhancing efficient communication beyond communicating through social networks and email groups. Especially, there are some countries already advanced in responding to specific challenges.

Considering the sample design of this study, the research is limited to investigate the difference between the perspectives of QHE parties i.e. HEIs, research field, accreditation agencies, and European QA organizations. Therefore, we suggest that further research will have to investigate similarities and variations among them. This would reveal whether the key stakeholders for developing quality in European HE are in the same line.

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CHAPTER SEVEN:

CONCLUSION & RECOMMENDATIONS

7.1 OVERALL CONCLUSIONS

As the present thesis investigates two areas, namely the QHE research field and the implementation of quality in European higher education and its associated challenges, the overall conclusions will be presented separately for each part. The contribution of the thesis for research and practice will follow. Furthermore, suggestions and recommendations based on the analysis will be discussed. Lastly, some reflections on the limitations of research and an outlook for future research will be provided.

7.1.1 PART I: THE RESEARCH FIELD OF QUALITY IN HIGHER EDUCATION

In this section, an overall conclusion of the first and second studies (chapters 3 and 4) will be demonstrated in the form of answers to the first four research questions (section 1.3).

❖ **RQ 1**: To which extent has QHE research been evolving or devolving over time?

The main findings of the studies allow us to draw a clear picture of the research field of quality in higher education through analysing information extracted from QHE publications. The studies have strong empirical evidence that QHE is a continuously evolving research field considering the bibliometric results, main features and characteristics of the field, the development of publications over time and the illustration of QHE topics from static and dynamic points of view (see figure 3-3).

Moreover, there is a strong increasing interest for publishing more academic literature to enrich the theoretical foundations of the research field. This growing interest from researchers, academic journals, and countries defies many opinions that describe quality in higher education as a 'fashion' that will fade later, or as a 'placebo' with insignificant impact (cf. Steinhardt *et al.*, 2017; Stensaker, 2007; Williams, 1993).

❖ **RQ 2:** What are the main characteristics and features of the QHE research field?

The bibliometric analysis revealed the main characteristics and features associated with the QHE research field; among others are:

- The vast majority of publications are journal articles, followed by conference papers, whereas, only a small number of books/chapters are available.
- Almost half of the literature is produced by 5 countries (the United Kingdom, the United States, China, Austria and Spain)
- The number of journal articles in the QHE domain is increasing over time. However, the number of conference articles and book chapters has been decreasing since 2011.
- The top five leading countries in publishing are the United Kingdom, the United States, Netherlands, Germany and Spain and the top three journals in terms of publishing relevant articles are, '*Quality in Higher Education'*, '*Quality Assurance in Education*' and '*Higher Education*'.

❖ **RQ 3**: What are the key topics addressed in the research field?

According to the results of chapter 4, there are 44 prominent topics in the QHE research field (see table 4-2). The top ten prominent topics in the table alone constitute 60% of all QHE topics, which demonstrates some trends in the field toward important issues faced by the sector. The analysis provides several themes QHE field. Nevertheless, study 2 is limited to discuss in detail the main addressed research within each theme. Hence, chapter 2 (section 2.2) covered significantly this aspect providing what QHE scholars investigated in their previous works, which accompanied by several explanations and examples. Furthermore, the analysis in the second study (chapter 4) demonstrated that the research field focuses heavily on enhancing the quality of educational components (i.e. teaching, students and curricula) more than quality system initiatives like QMS, QA, TQM, QFD and ISO. However, the comparison among the previous initiatives revealed that there is a clear interest in QA topics.

❖ **RQ 4**: How are these topics interlinked to each other?

The QHE topics are grouped into four main areas: 'Education System', 'System Improvement', 'Supporting Environment' and 'Managing Quality'. Each of them contains a number of topics that are more likely to be linked to each other (see figures 4-2 and 4-5).

Mapping the prominent QHE topics over time showed that the research of these categories has been saturated despite the increasing number of publications. This indicates that the QHE as a research field is to become more stable and mature. This can be explained by research phases where topics gradually expand in their developmental phase until a certain point is approached. After that, each topic is individually investigated at a deep level. This explains why there is a positive correlation between the number of publications and the stability of themes. Moreover, given the incremental number of links among the prominent topics, the complexity of the research field has also increased. This might be interpreted by the fact that such a research field is multidisciplinary and emerging from different perspectives of higher education and quality research.

As it has been previously shown in chapter 2 (section 2.3), the research field of quality in higher education consists of several complex and overlapping topics. Thus, the first two studies are designed to provide a comprehensive overview of the research field, its characteristics, its development over time and its associated topics and links among them. This will improve our understanding of the QHE research field and help us reduce the complexity of topics researched.

Additionally, the previous discussion -presented in chapter 2- about lack of clarity regarding quality meaning in educational organizations is still to be considered one of the major challenging topics in the field (section 2.1). Bearing in mind that this might have an impact on the implementation process, this analysis could mitigate the problems the sector is facing and

help find a common definition for quality, leading to successful adoption of quality in higher education.

7.1.2 PART II: QUALITY IMPLEMENTATION & ASSOCIATED CHALLENGES

This part addresses the overall conclusions of studies 3 and 4 (chapters 5 and 6) and answers the research questions (RQ5 to RQ9).

❖ **RQ 5**: What are the main characteristics of quality implementation in European HEIs?

Considering the results of chapter 5 (see section 5.4), it seems that HEIs rely on national standards or self- designed models more than other quality initiatives like TQM, EFQM or ISO. Thus, it appears that initiatives which came from the various industries did not find their way to European HEIs. Also, educational institutions tend to prefer a national standard or their self-designed models over European or international standards.

Moreover, the implementation of quality in HEIs is more obvious in some areas of the HE system in comparison to others. For instance, quality is highly implemented for teaching and learning activities and developing the curriculum and it is not implemented as much in research or organisational management areas.

❖ **RQ 6**: How well have European HEIs implemented quality assurance standards?

The assessment of quality implementation in European HEIs was based on the nine standards of ESG (see table 5-1). European HEIs demonstrated through implementation of certain criteria, such as public information, learning resources and student services, information management as well as student admission and recognition. However, other criteria like policy for quality, design study programme, student-centred learning and teaching staff are implemented to a lesser extent (see table 5-2). Through a closer look to the nature of such criteria and its link to QHE meaning, it seems that European HEIs ought to make determined

efforts to successfully implement quality initiatives since the currently less-implemented quality criteria are ones that are considered of higher vitality.

Regarding the involvement of internal and external stakeholders for enhancing quality, it seems that the involvement of external stakeholders is less compared with the internal ones. Additionally, the results illustrated that within the internal stakeholders of the educational organisations, the involvement of academic staff is significantly higher than the contribution of the students. In the same vein, accreditation agencies in European countries are significantly more involved compared to government and labour market.

- **RQ 7**: What kinds of differences exist between countries in their implementation of the standards?

The results demonstrated that the implementation of QHE in European counties differs according to the country setting (see table 5-3). Some countries demonstrated decent implementation for quality standards like the Netherlands, Denmark, Estonia and Lithuania, whereas, other countries appear to have a poorer performance like Kosovo, the Czech Republic, and Italy. Therefore, it seems that the northern European countries have a better implementation setting compared to the others in our sample. There might be many factors that affect QA implementation, among others; the number of educational institutions in the country, the number of students at HEIs, accreditation regulation and governmental support. However, our results are consistent with those of Falkner & Treib (2008), who suggest that compliance towards implementing EU regulations and rules plays a role in the level of QA implementation.

- **RQ 8:** What are the major challenges associated with adopting quality in European higher education?

European HEIs face several challenges associated with adopting quality to their systems on the organizational level, during the execution phase and others related to quality culture and

leadership. Such challenges are observed based on experts' opinions from several perspectives (HEIs, accreditation bodies, research, and European QA agencies). As far as the organizational challenges are concerned, it seems that most discussed challenges are ones related to the educational system components followed by external stakeholder challenges and QMS challenges. In more detail, challenges associated with students and academics are the most discussed challenges in comparison with others within the same category. Whereas, within QMS, quality definitions and having multiple stakeholders grab the attention of the experts. Furthermore, the experts discussed additional challenges associated with external stakeholder (i.e. government, labour market, and accreditation bodies). Such organizational challenges are revealed and deeply discussed in chapter 6 (section 6.4.1).

In the same vein, the experts mentioned several challenges associated with the execution phase. They referred also to the importance of funding and competency to achieve quality (see all associated challenges in section 6.4.2). Furthermore, the experts discussed the roles and responsibilities of leadership in building a quality culture as well as for supporting QHE. They also demonstrated the required adaptive and technical skills for successful implementation (see all associated challenges in section 6.4.3).

- **RQ 9**: What are the main differences among the European countries in terms of quality challenges?

Concerning the comparison of challenges among the European countries, the results demonstrated that the differences between the countries are much less than the similarities. Several challenges appear across the countries such as challenges associated with academic staff, students and quality definitions. However, a few challenges show clear differences amongst the countries, for example, accreditation, and research related challenges. Such challenges that are related to HE regulation, accreditation rules, or even institution's profile, usually differ from country to another.

The complementarity between the qualitative and quantitative studies (chapter 6 and 7) is interestingly obvious and significant where the less ranked standards are associated with several challenges (e.g. teaching staff). Contrary to the high ranked standards which gained a few challenges (e.g. designing the curriculum). This complementarity, however, enables this thesis to confirm a couple of aspects associated with quality implementation, inter alia:

- Based on the number of major challenges facing HEIs and the outcome of the standards assessment (especially standards 1, 2, 3, and 5), it seems that HEIs are still struggling with a wide array of challenges and further actions are required not only from HEIs but also from the external stakeholders where implementing quality is a collective responsibility of all actors.
- There is a clear lack in the involvement of internal and external stakeholders for improving quality at European HEIs, particularly students, graduates, and the labour market. Contrary to major involvement from academics, organisational leaders and accreditation agencies.
- Engaging all stakeholders is a challenging issue for HEIs and is not totally taken into consideration, even though it has been emphasised by European QA organizations, national accreditation agencies and QHE researchers as well (see section 2.3).
- Although there are differences across the European countries in terms of types of challenges and quality implementation (see sections 5.6 and 6.5), many challenges are alike and are common among them.
- Despite the high involvement of accreditation organizations to support and adopt quality at HEIs, several challenges have been demonstrated by the experts in this aspect particularly. This coupled with argument of Cardoso *et al.* (2017), who stated that, 'external QA plays a significant and highly determining role regarding the

definition and shaping of internal QA' (2017, p. 338), leads to the conclusion that accreditation agencies are still acting ineffectively, and in some cases as constraints, despite their vital roles for shaping quality on the national level.

As it has been previously discussed in chapter 2 (section 2.3), implementing quality has been supported by European QA organisations as well as educational policy-makers. However, quality implementation on the national level confronted with plenty of barriers and associated with several challenges. According to our findings in the last two studies, the European countries mostly have the same challenges with some variations (see section 6.5) and could be compared based on their level of implementation (see section 5.6). Thus, enhancing the collaborations among them and encouraging the mutual-experiences might facilitate the difficulties facing educational organizations

7.2 CONTRIBUTION FOR RESEARCH FIELD

This thesis postulates that the novelty of the topics addressed are significant, given that only scant attention has been paid to our studied topics and the needs for such topics. The four studies filled clear gaps founded in the QHE research area, bearing in mind that previous research paid less attention to investigating the whole research field and overlooked comparing the large scale of countries. While the majority of publications focused on a 'single-case' type (Prakash, 2018; Pratasavitskaya & Stensaker, 2010), the present thesis covered a broad geographical scope for investigating QHE and a wide range of QHE publications for studying the research field.

Second, the results of the present research notably provide an added-value to both QHE literature as well as to several stakeholders on national and European levels (i.e. HEIs, accreditation agencies, quality leaders, educational policy-makers and European QA agencies).

Particularly, this thesis provided valid and generalizable results based on large sample size, validity and reliability test, and the complementarity of the results in the studies.

Third, the methodology in the second study (chapter 4) placed our work at the forefront of the QHE studies that employed a co-word approach in favour of mapping its publications. More importantly, its originality lies in using the publications' keywords as an alternative to the traditional use of either 'citation' or 'full-text' analysis.

Additionally, mapping QHE topics (see figure 4-5) does not only contribute to the theoretical part of QHE, but also deepens our understanding of the overall picture of QHE. Understanding QHE topics and linkages between them could help other scholars in two different aspects. First, it provides a glance to some research gaps through presenting the most and the least investigated topics in QHE domain (see table 4-2). Second, it enables them to perceive their addressed topics from a different perspective through considering other related subjects that are linked to their topics based on our mapping (see figure 4-5).

Finally, this thesis contributes to the literature of QHE by conducting a comprehensive analysis of the research field and its characteristics. Also, it provides insights about the QHE topics and the interlinking between them. This thesis collected responses from over 20 countries to provide a holistic assessment for implementing quality for the European countries. Additionally, it highlighted the current challenges associated with both internal and external stakeholders based on the 40 experts' perspective. Moreover, it identified the differences of QHE implementation and challenges among the countries through conducting a comparative analysis.

7.3 IMPLICATIONS FOR PRACTICE

This thesis also has several implications associated with the field of practice where the results are important for several QHE related-actors, which are:

- **Higher education institutions** through understanding how their peers adopted quality and what kind of challenges they are facing from the national and European perspectives.
- **Educational policy-makers** can use our results to support educational organizations and accreditation agencies to the enactment of new rules and laws in the interest of improving the quality of teaching and learning.
- **National accreditation agencies** would have a higher ability to observe the status quo of quality implementation in their country and compare it to the others. Additionally, perceiving HEIs challenges holistically will help to mitigate such challenges.
- **European QA organizations** particularly who are responsible for ESG will largely benefit from the results of the comparison of the countries in a way that allows them to monitor the usability and level of implementation for each QA standard, and thus, this might contribute to the improvement of their own standards and guidelines.

7.4 RESEARCH RECOMMENDATIONS

The results of the first two studies demonstrated that the QHE research field is an emerging research area and there is a growing interest increasing over the time from scholars, countries, academics' journals alongside with educational sectors' stakeholders. However, the research area needs more improvement to enhance our understanding of quality, its definition, and developing a successful model for HEIs to implement.

Therefore, further development can be achieved through recognising QHE as a separate research specialization instead of considering it as an evolving area between the fields of 'higher education' and 'quality', will help increase the development of the research field (cf. Morris & van der Veer Martens, 2008), and thus enable building additional scientific knowledge and gain additional QHE experience since there is an obvious scarcity of academic

and professional specialists in this sphere, where most HEIs build their experience from empirical and personal observations (cf. Hénard, 2009).

Investigating in building models based on research -which is essentially designed for the educational system- might be an important area to explore. This is based on the claim that most quality initiatives that are inherited from the industrial sector (i.e. TQM, EFQM, or excellence model) have not been widely accepted nor successfully implemented in the higher education environment. That is why most of the current initiatives are based on empirical limited experience designed for short-run purposes (Hénard, 2009).

The findings of studies 3 and 4 have several implications that would help in improving QHE for future practice. The results suggest that considering the following aspects might be helpful in implementing quality at the institutional level:

- The QHE concept is complex, multidimensional, and open to several ranges of interpretations (see section 2.1, section 3.1 and section 4.1). Following a pragmatic approach based on the institutions' interest with the involvement of both internal and external stakeholders might support finding a common understanding of what quality means for a given institution.
- Adopting quality at the institutional level is long-term efforts matter combined with multiple constraints. This gets worse when there is no explicit model to follow on the national level, other than the rules and regulations coupled with governmental pressure to be fulfilled (cf. Martin & Stella, 2007). HEIs could achieve more improvement through embedding quality into their strategic plans, calling for a permanent commitment from senior management leaders.
- Stakeholders' participation for quality-related activities is a challenging aspect for HEIs. An appropriate recommendation in this regard would be to adopt 'convincing' discussions

and highlighting benefits of quality as an alternative for conventional means (top-down approach), and furthermore, encouraging all initiatives from all stakeholders at a different level. This would potentially lead to increasing the involvement and enhancing the communication between the stakeholders, which would be in the interest of quality improvement in European higher education.

- Sharing the responsibility of quality among all stakeholders instead of centralising it at the senior management level or confining it to a 'quality unit' is an important matter recommended by the experts (see section 6.4.3). This amelioration could increase the sense of process-ownership for stakeholders, which could play a role in shifting the stakeholders from *'implementers'* to *'representatives'* of quality.
- Reducing the reluctance of academics requires to consider empowering their roles and maintaining their autonomy in the first place. Additionally, reducing bureaucracy, decreasing workload, promoting QHE benefits and providing adequate resources are vital matters to be taken into consideration.
- Highlighting the important role of teaching in the learning process and its impact on students, labour market, and society is a clear need. Unfortunately, many HEIs recognize and award their academic staff based on research output only. Neglecting the teaching efforts under the argument that research came in the first place in their mission not teaching might create a negative impact on the quality of teaching, and hence, it is the responsibility of HEIs to consider changing this aspect. Thus, considerable improvement might be realized by increasing the recognition of the vital role of teaching.
- Increasing the student interest in developing quality requires increasing the effective engagement of students. Therefore, appropriate considerations would be to emphasize the students' contributions and opinions allowing them to design their own initiatives. Moreover, bringing their voices to influence the organisational policies for improving

quality is a key step to be taken into consideration. Such a challenge is extremely important since students are the main beneficiary (customer) in the educational environment (Guilbault, 2018). Increasing student involvement and extending their representations in organizational boards is an apt matter that needs to be recognized. However, this loses relevance if it is not supported by follow-up actions.

- It would be more appropriate for improving quality when accreditation agencies shift the concept of quality from 'standards fulfilment' and 'rules compliance' into continuous improvement tool for developing HE system. Therefore, such agencies might consider supporting the independence of HEIs to select their own understanding of quality and encouraging building a culture of quality instead of focusing on auditing self-assessment reports for the accreditation process.

Furthermore, additional improvement might be realised through shifting to European alternative initiatives established for educational purposes like ESG, particularly, with all European efforts to design a model that takes into consideration Bologna declaration and its follow-up ministerial conferences (see section 2.3).

This shift might bring more collaboration for improving quality and create a competitive atmosphere which urges quality commitment instead of meeting some national standards imposed by the government. However, compliance with the internal and external ESG standards needs high coordination efforts among the government, national accreditation agencies and educational organizations. Furthermore, exchanging experiences especially for countries that are on the same level of implementation and type of challenges might be meaningfully effective.

As a summary, table 7-1 provides an overall illustration for conclusions and recommendations for quality practice and research as well as the associated contributions.

	Conclusions	Recommendations
Research	• Evolving Research field • Complex multidisciplinary research field • Saturated themes in the research field • Increase interest from countries, journals, and HEIs • Main 4 areas of QHE (Education System, System Improvement, Supporting Environment and Managing Quality) are identified • Growing interest in education system topics over quality models and initiatives ones	• Consider QHE a research specialization • Steer the directions of the research toward encouraging to find a specific model for education as well as to find means to define QHE on the institutional level
Practice	• Preference of national standards or self-designed model • More successful implementation in learning activities in comparison to organisational management and research • additional efforts are required to the core of QA standards • Implementing quality is a shared responsibility including accreditation agencies • Lack of external stakeholders' involvement especially labour market • Academic staff involvement in QA activities is much higher than the contribution of the student • Northern European countries have a better implementation comparing to others • HEIs struggles with array of challenges on the institutional level (QM, educational system and externals stakeholders) • Several challenges appeared during the execution phase • Urgent needs for both funding and training • Building quality culture related to the important roles of leadership • The majority of the challenges are common among the European countries. • Accreditation agencies are still acting insufficiently	• Follow pragmatic approach to defining quality and its roles at HEIs to find a common understanding accepted from all stakeholders • Embed quality to the HEIs' strategic plan • Increase the leadership commitment • Rely on convincing discussions for increasing the participation of stakeholders • Increases the sense of processes-ownership for stakeholders • Include all stakeholders including students and labour market is an inevitable aspect • Avoid academic reluctance and increase the autonomy of academic staff. • Highlight the importance of teaching and teachers • Recognise and award both research and teaching activities • Increase student involvement and their representation • Consider QA standards on European level • Increase the cooperation and collaboration among the countries that classified at the same level • Engage accreditation agencies as a partner in quality improvement processes is vital for shaping quality on the national level • Shift the scope of accreditation agencies from auditing QA reports and benchmarks to support building a quality culture

Contributions

Research area	*HEIs & Policy-makers*	*National & EU QA agencies*
• Publishing 4 studies based on practices' needs and research gaps. • Generalizable results for several stakeholders • Novelty of implementing Co-words based on keywords at QHE field. • Mapping the QHE literature and illustrating the interlinks among topics. • Contributing to reducing the complexity of the research field • Covering broad geographical scope in the European countries	• Providing current implementation status for QA standards on the institutional level • Revealing challenges and difficulties for adopting quality to HEIs • Offering suggestions to overcome the challenges	• Illustrating a picture for quality implementation on national and European level • Providing a better understanding of the usability of ESG standards. • Encouraging an accreditation agency to shape its role of internal QA on national and European level

Table 7- 1: Linking the conclusions, recommendations and contributions of the thesis.

7.5 LIMITATIONS AND AREAS FOR FURTHER RESEARCH

For the studies associated with the QHE research field, the method relied on SCOPUS database in order to extract both keywords and bibliometric information. However, employing multiple sources for collecting data could provide a more comprehensive outlook to QHE research field. Furthermore, expanding the resources of data will help take into consideration other factors, such as publication language and regional/international discourse which was limited in our studies.

Considering the last two studies, this work conducts a comparison for implementation and challenges at the European level. Despite the limitations of the research, completing this comparison based on HEI's type, profile, or size is significantly vital to discovering more factors relevant to QHE. Additionally, exploring the different perspectives of quality is very important. A next step might be to draw a comparison between internal and external stakeholders, or among HEIs, accreditation agencies, and European QA experts.

The scope of this thesis is limited in terms of external QA, where the studies are not able to cover the ways of improving external quality factors despite the fact that it has an impact on quality at HEIs. Therefore, investigating the factors affecting improving external QA on the European level is crucial to be considered in future research. Finally, assessing the differences between national QA standards and European ones is important to be investigated in order to move toward a European quality system without confronting several barriers.

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APPENDIXES

APPENDIX 1: QUALITY IMPLEMENTATION SURVEY

Technische Universität Berlin

Quality Assurance in European Higher Education

1. **Introduction:**

Thank you so much for taking part in this questionnaire. This study is a part of a doctoral thesis at the **Technical University of Berlin**. This survey aims to check the implementation of quality assurance at the European higher education institutions. The survey questions are based on The European Standards and Guideline for quality assurance in higher education (ESG 2015). It is important to know that this survey consists of less than 30 questions and should only take 12-14 minutes to complete. Be assured that all answers will be strictly confidential.

General Information

* 1. Country

2. Institution Name:

* 3. Type of Organization:

- ◯ Multidisciplinary University
- ◯ Technical University
- ◯ Specialized University
- ◯ College \ School
- ◯ University of Applied Science (Polytechnic)
- ◯ Research Institution
- ◯ Other (please specify)

* 4. Profile of the Organization

- ◯ Public
- ◯ Private
- ◯ Other (please specify)

* 5. Number of all students (including Full\Part-time, Under\post graduates)

Students Estimated by thousands (x 1000)

0 200

General Information about the Quality Assurance System

6. The institution offers (Please select all available levels or equivalent)

- ☐ Bachelor
- ☐ Master
- ☐ Doctorate (or 3rd cycle equivalent)
- ☐ Other (please specify)

* 7. The institution started to apply quality system as of (Please state the year)

8. Type of applied quality management system

- ◯ Total Quality Management
- ◯ ISO 9001 (QMS)
- ◯ Excellence model (e.g EFQM)
- ◯ Not a specific Model
- ◯ Other (please specify)
- ◯ A model developed by the university
- ◯ An adapted model for the research area
- ◯ System based on the national standards/guidelines

9. The quality system in my institution is

- ◯ Centralized (Have a central unit for Quality)
- ◯ Decentralized (Each program is responsible)
- ◯ Mixed (Both of them)
- ◯ Other (please specify)

10. How many people work full-time for quality issues in the institution

Working fully for Quality issues

0 — 100

11. How many people work on a part-time basis for quality issues in your institution

Part-time contract or not fully assigned to Quality issues

0 — 200

12. To which extent do you think the quality assurance system is important for your institution.

Not Important						Very Important
1	2	3	4	5	6	7

* 13. To which extent do you think that quality assurance system is applied in the following area:

	Not applied 1	Poorly applied 2	Fairly applied 3	Satisfactory applied 4	Well applied 5	Very Well applied 6	Completely applied 7	N/A
Organizational Management	○	○	○	○	○	○	○	○
Teaching and Learning Activities	○	○	○	○	○	○	○	○
Curriculum Development	○	○	○	○	○	○	○	○
Research	○	○	○	○	○	○	○	
Students Services	○	○	○	○	○	○	○	○
Overall system	○	○	○	○	○	○	○	○

.1. Policy for quality:

ccording to ESG: 2015, Institutions should have a policy for quality assurance that is ıade public and forms part of their strategic management. Internal stakeholders should evelop and implement this policy through appropriate structures and processes, while volving external stakeholders.

14. Does the institution has a

	Yes, on the institutional level	Yes, on the faculty \ Department level	Don't have
QA System	○	○	○
QA Policy	○	○	

○ Other (please specify)

* 15. Your institution adapts the quality assurance policy within its overall strategic plans

Not adapted 1	2	3	4	5	6	Fully adapted 7	N/A
○	○	○	○	○	○	○	○

* 16. Internal stakeholders' participation

	Internal stakeholders participate in Developing the quality assurance system.	Internal stakeholders participate in Implementing the quality assurance system.
Students'		
Academic Staff		
Administration Staff		
Other, please specify below		

please specify

* 17. External stakeholders are involved in the quality assurance system.

	Never 1	Rarely 2	Occasionally 3	Sometime 4	Frequently 5	Usually 6	Always 7
Government							
LabourMarket							
Accreditation \ Quality Assurance Agency							
Graduates							
Other, please specify below							

Please specify

2.2: Design and approval of Programme:

According to ESG: 2015, Institutions should have processes for the design and approval of their programmes. The programmes should be designed so that they meet the objectives set for them, including the intended learning outcomes. The qualification resulting from a programme should be clearly specified and communicated and should refer to the correct level of the national qualifications framework for higher education and, consequently, to the Framework for Qualifications of the European Higher Education Area.

* 18. Curricula of programmes are designed by involving

	Programmes development	Frequency of involvement
Internal stakeholders (**Students**)		
Internal stakeholders (**Academics**)		
External stakeholders (**Graduates**)		
External stakeholders (**Labour Market**)		

2.3. Student-centered learning, teaching and assessment:

According to ESG: 2015, Institutions should ensure that the programmes are delivered in a way that encourages students to take an active role in creating the learning process, and that the assessment of students reflects this approach.

* 19. To what extent do you think programmes are developed in the following aspects

	Yes, for all Programmes	Yes, for some Programmes	None of the Programmes	Don't Know
Programmes are designed with overall objectives that are in line with the institutional strategy				
Programmes have explicit intended learning outcomes				
Programmes define the expected student workload				
Programmes include well-structured placement opportunities (for example internships)				
Programmes have formal approval institutional process.				

* 20. To which extent do you agree that teaching in your institution

	Strongly disagree 1	Disagree 2	Somewhat disagree 3	Neither agree nor disagree 4	Somewhat agree 5	Agree 6	Strongly agree 7	N/A
respects the diversity of students and their needs, enabling flexible learning paths	○	○	○	○	○	○	○	○
considers and uses different methods of delivery, where appropriate	○	○	○	○	○	○	○	○
flexibly uses a variety of pedagogical methods	○	○	○	○	○	○	○	○
regularly evaluates and adjusts the modes of teaching methods	○	○	○	○	○	○	○	○
encourages a sense of autonomy in the learner, while ensuring adequate guidance and support from the teacher	○	○	○	○	○	○	○	○
promotes mutual respect within the learner-teacher relationship	○	○	○	○	○	○	○	○
has appropriate procedures for dealing with students' complaints	○	○	○	○	○	○	○	○

* 21. Considering the importance of assessment for the students' progression and their future careers, quality assurance processes for assessment take into account the following: (***Please select all possible answers***)

- [ ] Teachers are familiar with the existing testing and examination methods
- [ ] Teachers receive support in developing their own skills in this field
- [ ] The criteria for and method of assessment, as well as criteria for marking, are published in advance
- [ ] The assessment allows students to demonstrate the extent to which the intended learning outcomes have been achieved.
- [ ] Students are given feedback or advise on the learning process
- [ ] The regulations for assessment take into account mitigating circumstances
- [ ] Assessment is consistent, fairly applied to all students and carried out in accordance with the stated procedures
- [ ] A formal procedure for student appeals is in place

2.4. Student admission, progression, recognition and certification:

According to ESG: 2015, Institutions should consistently apply pre-defined and published regulations covering all phases of the student "life cycle", e.g. student admission, progression, recognition and certification.

* 22. Does your institution publish all the regulations related to the studer services like admission, progression, recognition and certification?

Yes	Yes, But not everything	No	N/A
○	○	○	○

* 23. To which extent do you agree with the following statements:

	Strongly disagree 1	Disagree 2	Somewhat disagree 3	Neither agree nor disagree 4	Somewhat agree 5	Agree 6	Strongly agree 7	N/A
The policies, admission processes and criteria are implemented consistently and in a transparent manner	○	○	○	○	○	○	○	○
My institution put in place both processes and tools to collect, monitor and act on information on student progression.	○	○	○	○	○	○	○	○
Induction to the programme is provided	○	○	○	○	○	○	○	○
My institution recognizes other students' qualifications, periods of study and prior learning on the national level.	○	○	○	○	○	○	○	○
My institution recognizes other students' qualifications, periods of study and prior learning on the international level.	○	○	○	○	○	○	○	○

2.5. Teaching staff:

According to ESG: 2015, Institutions should assure themselves of the competence of their teachers. They should apply fair and transparent processes for the recruitment and development of the staff.

* 24. Which from the following activities are applied at your institution, (**Please select all possible answers**)

- [ ] Selecting best academic staff
- [ ] Following clear conditions of employment that recognize the importance of teaching
- [ ] Offering opportunities for professional development of teaching staff (e.g. training courses, workshops)
- [ ] Encourages scholarly activity to strengthen the link between education and research
- [ ] Encourages innovation in teaching methods and the use of new technologies
- [ ] Offering units for pedagogical or didactic development
- [ ] Supporting the academic freedom of the teachers

* 25. How often the following is applied in the assessment of academic staff at your institution?

	Never	Rarely	Occasionally	Sometime	Frequently	Usually	Always	N/A
Students feedback survey	○	○	○	○	○	○	○	○
Teaching performance	○	○	○	○	○	○	○	○
Research Performance	○	○	○	○	○	○	○	○

2.6. Learning resources and student support:

According to ESG: 2015, Institutions should have appropriate funding for learning and teaching activities and should ensure that adequate and readily accessible learning resources and student support are provided.

* 26. To which extent do you agree with the following statements: The institution

	Strongly disagree 1	Disagree 2	Somewhat disagree 3	Neither agree nor disagree 4	Somewhat agree 5	Agree 6	Strongly agree 7	N/A
provides the students with a variety of resources that assist the student learning (Library, labs, IT infrastructure, etc..).	○	○	○	○	○	○	○	○
offers programmes that are suitable for full-time students	○	○	○	○	○	○	○	○
offers programmes that are suitable for part-time students	○	○	○	○	○	○	○	○
offers programmes that are suitable for international students	○	○	○	○	○	○	○	○
offers programmes that are suitable for students with special needs	○	○	○	○	○	○	○	○
allocates the adequate resources to shift towards student-centered learning	○	○	○	○	○	○	○	○
informs about all the services available for	○	○	○	○	○	○	○	○

2.7. Information Management:

According to ESG: 2015, Institutions should ensure that they collect, analyses and use relevant information for the effective management of their programmes and other activities.

* 27. To which extend the organization's management is interested in the following information to plan its strategies and activities

	Strongly disagree 1	Disagree 2	Somewhat disagree 3	Neither agree nor disagree 4	Somewhat agree 5	Agree 6	Strongly agree 7	N/A
Key performance indicators	○	○	○	○	○	○	○	○
Profile of the student population	○	○	○	○	○	○	○	○
Student progression	○	○	○	○	○	○	○	○
Student success	○	○	○	○	○	○	○	○
Student drop-out rates	○	○	○	○	○	○	○	○
Students' satisfaction with their programmes	○	○	○	○	○	○	○	○
Learning resources and studentsupport available	○	○	○	○	○	○	○	○
Career paths of graduates								

2.8. Public Information:

According to ESG: 2015, Institutions should publish information about their activities, including programmes, which is clear, accurate, objective, up-to-date and readily accessible.

* 28. The organization provide a clear information about the following

	Strongly disagree 1	Disagree 2	Somewhat disagree 3	Neither agree nor disagree 4	Somewhat agree 5	Agree 6	Strongly agree 7	N/A
Programmes at the institution	○	○	○	○	○	○	○	○
Selection criteria for student	○	○	○	○	○	○	○	○
Intended learning outcomes of offered programmes	○	○	○	○	○	○	○	○
Awarded qualification	○	○	○	○	○	○	○	○
Assessment procedures teaching and Learning	○	○	○	○	○	○	○	○
Learning opportunities for all students	○	○	○	○	○	○	○	○

2.9. On-going monitoring and periodic review of programmes:

According to ESG: 2015, Institutions should monitor and periodically review their programmes to ensure that they achieve the objectives set for them and respond to the needs of students and society. These reviews should lead to continuous improvement of the programme. Any action planned or taken as a result should be communicated to all those concerned.

* 29. The institution includes the evaluation of the following:

- ☐ The content of the programme
- ☐ The students' workload
- ☐ The students' progression
- ☐ The students' completion
- ☐ The effectiveness of procedures for assessment of students
- ☐ The student expectations
- ☐ The student needs
- ☐ The student satisfaction
- ☐ The student employability
- ☐ The learning environment and support services and their fitness for purpose for the programme

☐ Other (please specify)

30. Any comments you would like to add

End of the questionnaire

Thanks a lot for your time

Please don't forget to click "Finished" at the end

31. If you are interested to read the researcher paper after publishing, please fill in the following details.

Name	
Position	
Email Address	
Phone Number	

APPENDIX 2: INTERVIEW PROTOCOL

Technical University of Berlin
Faculty of Economics and Management
Entrepreneur and Innovation Management Dept.

Interview Protocol

Introduction — Time: 5 Min

Welcome and thank you for your time to take part in this interview. My name is Khaled Alzafari; I am a doctoral researcher at ***Technical University of Berlin***. My research area is the field of quality management in the European higher education (HE).

As you know, the topic of quality management in higher education is complex and multifaceted due to a number of factors. In many cases, universities have already implemented a range of quality management initiatives, but they have been facing a lot of challenges and barriers. This prompted many researchers to give early verdicts regarding the applicability of quality to Higher Education Institutions (HEIs).

Based on a literature review on quality challenges in HE in addition to the work of (Fixsen & Blasé, 2006-2012) concerning an implementation research in higher education, I have developed a framework which addresses three different types of challenges, namely, Organization, Leadership, and Implementation Challenges. Each of which includes sub-categories, as illustrated in the figure shown.

In order to allow future developments, my research attempts to find out further challenges and barriers in addition to investigating avenues available to overcome current obstacles.

Therefore, I am in the process of interviewing several experts to find out their perspectives of challenges in the implementation of Quality in Higher Education (QHE).

If you have any questions or concerns before we start, please do not hesitate to raise them with me. If not, let us begin.

Personal information

Name: Data: DD/MM/YYYY

Organization/ University: Position:

Field(s) of study: Years of Experience in the field(s):

Section 1: Organization Challenges Time: 25 Min

A. Quality Systems in Higher Education:

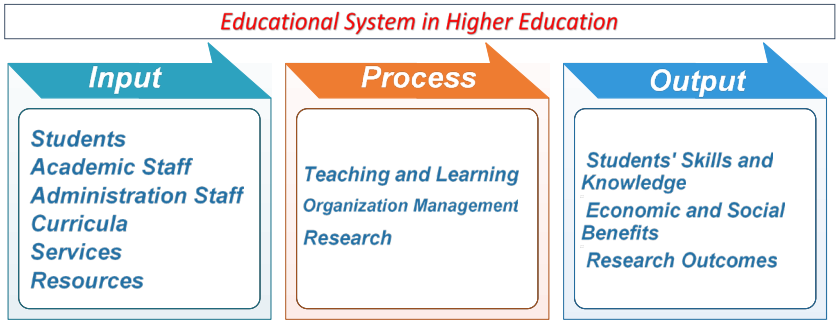
Based on my literature review, ***Quality Management System*** (QMS) in higher education is a complex and multifaceted topic and it is so difficult to implement due to many reasons. For example, the complexity of the environment, the existence of various stakeholders with different interests, the notion that quality is a vague term and open to interpretation, and there is no a unified model or system that is widely used in HEIs. Additionally, other refer to some challenges related quality tools and measure.

1. Regarding the implementation of quality systems at HEIs, which of the above claims do you see as the biggest challenges?

2. Apart from the ones discussed, what are the other biggest challenges related to the implementation of quality systems in HEIs?

3. In your experience, how the challenges you just mentioned can be overcome?

Educational System: the literature review in the field of higher education identified the components of the educational systems (input, process, and output) as illustrated in the figure below:



1. Looking at the above figure, what are the major challenges associated with the educational system components?

2. How could HEIs overcome the mentioned challenges?

External Stakeholders:

The research field of quality in higher education has identified several external stakeholders such as Government, Society, labor market, alumni, and HE agencies.

3. In your opinion, what are the challenges for HEIs concerning the external stakeholders? Moreover, how can HEIs overcome such challenges?

4. Do you think that some external stockholders have a negative impact? Who, and why? .and, how can external stakeholders support the implementation of quality in HEIs?

Section 2: Implementation Challenges — Time: 15 Min

A. Execution

1. Implementing quality in HEIs needs a lot of planning, support, feedback, performance assessment, etc. What are the specific challenges you see (or know from your experience) at a HEI during the stage of implementation?

B. Competency

2. Competency (Training and coaching) is playing an important role in the implementation quality in HEIs. To what extent do you feel that this is important for implementation? Moreover, what kind of training and coaching should people get during the implementation and after?

3. Do you think there are alternatives for training and coaching your own staff, such as using technology & software, or using external staff/consulting?

C. Funding:

4. Funding is seen as one of the key success factors for implementation, why? What could addition funding used for in order to have a successful implementation, are any other alternative when there is lack of funding?

Section 3: Leadership Challenges — Time: 10 Min

A. Responsibility & Support:

Leadership is the main contributor for any success or failure in the organization. In our case, this role is not limited to managing and leading the implementation processes, but extended to other roles like supporting the development, managing change, providing funding, and building a quality culture.

1. What are the different roles of a leader in implementing quality in HE? In addition, how should leaders be prepared for/ supported for fulfilling such roles?

B. Quality Culture:

2. Literature refer to many challenges when it came to building quality culture e.g. doubting quality and fear of change. How can leaders build a quality culture to ensure that all employees will be involved and thinking of quality as a way of continuous improvement to their work and not as an additional workload? What are the best practice to have quality culture supporting the implementation?

Do you think previous framework (Page 1) is taking into consideration all the challenges facing the implementation of quality in higher education? If not, which ones are missing?

Follow-up

Would it be ok for us to contact you in case of any follow-up?

☐ No ☐ Yes

1. Are these views your own personal opinion, or they of your organization?

☐ My organization's Views ☐ My own Personal opinion

May we use the name of your organization?

☐ I don't prefer ☐ Yes, and I could sign a form or send a conformation email

Additional Feedback

Do you have any additional comments or feedback you would like to add?

The End

Thank you so much for your valuable time and effort

APPENDIX 3: INTERVIEWEES' INFORMATION

Country	Code	Title	Role	Type	Gender	Position
Finland	F.1	Prof. Dr.	HEI	Academic	Male	Vice rector
	F.2	Mrs.	HEI	Non-Academic	Female	Quality Manager
	F.3	Dr.	Researcher	Academic	Male	Senior Researcher and National Editor of Scandinavian Journal of Education
	F.4	Mrs.	QA Agency	Non-Academic	Female	Counsellor of Evaluation
	F.5	Dr.	HEI	Academic	Female	Director of Development (Vice Rector Previously)
Austria	A.1	Dr.	HEI	Academic	Male	Head of Evaluation & Quality Enhancement office
	A.2	Mr.	HEI	Non-Academic	Male	Director Performance and Quality Management
	A.3	Dr. rer.nat.	Researcher	Academic	Female	Leading the project "Internal Quality Management in Competence-Based HE"
	A.4	Dr.	QA Agency	Academic	Female	Head of Department (Accreditation & International Affairs)
	A.5	Mag. Dr.	HEI	Academic	Female	Head of Quality Management and Teaching Development
	A.6	HR Mag. Dr.	HEI	Academic	Male	Deputy Head of the Quality Unit
	A.7	Mag.	HEI	Non-Academic	Male	Head of Quality Management
Germany	G.1	Dr.	HEI	Academic	Male	QA of teaching and learning
	G.2	Univ.-Prof. Dr.	HEI	Academic	Male	Center for QA and Development
	G.3	Prof.Dr.rer.pol.	HEI	Academic	Male	Professor of Higher Education and Professionalization of Academic Teaching, vice dean of academic affairs
	G.4	Prof. Dr.	HEI	Academic	Male	Vice President for education
	G.5	Mr.	QA Agency	Non-Academic	Male	Senior Consultant at AQAS (Agency for Quality Assurance through Accreditation of Study Programmes)
	G.6	Dr.	Researcher	Academic	Female	Head of CHE (Higher Education Research center in Germany)
	G.7	Dr.	QA Agency	Academic	Male	Managing Director and Previously President of CEENQA
Spain	S.1	Mrs.	HEI	Non-Academic	Female	Responsible for quality Audit at Quality Unit
	S.2	Prof. Dr.	Researcher	Academic	Male	Educational Research Department, Vice rector for quality and Evaluation (Previously),
	S.3	Prof. Dr.	Researcher	Academic	Male	Visiting Fellow Oxford Centre for Higher Education Policy Studies.
	S.4	Dr.	QA Agency	Academic	Female	Head of evaluation at Unibasq
	S.5	Dr.	QA Agency	Academic	Male	Head of QA Office
	S.6	Prof. Dr.	HEI	Academic	Male	Head of the quality Office
	S.7	Mrs.	HEI	Non-Academic	Female	Head of the Quality Office

Poland	P.1	Prof. Dr.	HEI	Academic	Female	Vice-Rector for Quality of Teaching
	P.2	Prof. Dr.	Researcher	Academic	Male	Head of Knowledge Management Research Unit, established Polish institutions of higher education (KRASP)
	P.3	Dr hab.	QA Agency	Academic	Female	Expert board Member of the Polish Accreditation Committee
	P.4	Prof. Dr.	HEI	Academic	Male	Rector's Plenipotentiary for Educational Quality
	P.5	Prof. Dr.	HEI	Academic	Male	Rector's Plenipotentiary for Quality of Education for Academia
	P.6	Dr.	HEI	Academic	Female	vice dean for quality improvement
The Czech Republic	C.1	Prof. Dr.	Researcher	Academic	Female	Center for higher education studies
	C.2	RNDr.	HEI	Academic	Female	Head of strategy and analysis department
	C.3	Doc. Ing.	HEI	Academic	Male	Head of quality management
	C.4	Mgr.	HEI	Non-Academic	Male	Quality director
European Organizations	EU.1	Mr.	EU Expert	Non-Academic	Male	Director of EQAR
	EU.2	Prof. Dr.	EU Expert	Academic	Male	Secretary-General for EAPAA
	EU.3	Mrs.	EU Expert	Non-Academic	Female	Head of Director for EUA Institutional Development
	EU.4	Prof. Dr.	EU Expert	Academic	Male	Managing Director EQAA

APPENDIX 4: ADMINISTRATIVE CONSENT FORM

Audio Tape Release Form

I voluntarily agree to be audio taped during the interview being conducted by Mr. Khaled Alzafari. I understand that the tapes will be used to gather information about EU higher education quality for scientific purposes, and that such information will be used to generate a research paper as part of a Ph.D. thesis. The tape will be kept for approximately three years and will be securely stored with Mr. Alzafari at TU Berlin. After the data are collected and transcriptions are made, the audio files will be destroyed.

_____ _____

My Signature Date

_____ _____

Signature of the interviewer Date

Comments:

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