



Review of the research literature on defining and demonstrating quality teaching and impact in higher education

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1. Executive summary

The study and its background

In March 2016, the Higher Education Academy (HEA) commissioned RAND Europe to conduct a literature review of research published since 2012, with the aim of identifying and summarising the key trends and issues in the literature on how 'quality teaching' and its impact are currently being defined and demonstrated at higher education institutions (HEIs).

While the assessment of 'quality teaching', and its impact in higher education (HE) have historically been neglected by researchers (BIS 2016a), the context around higher education teaching is rapidly changing. An HEA publication recently noted that the importance of "high quality teaching" in higher education is becoming increasingly emphasised both in the United Kingdom (UK) and abroad, as the "knowledge society" and global competition have strengthened (Land and Gordon 2015). Excellence in teaching has become more entrenched in higher education policy and in the educational strategies of academic institutions, and increasingly linked to the performance and assessment of these institutions (Skelton 2005). Despite this, debates remain – and indeed have intensified in recent decades – over what 'quality', 'excellence' and 'impact' in relation to teaching really mean (Land and Gordon 2015). Research has suggested that conceptions of 'quality teaching', and the understanding of its purpose, remain varied, with one report describing the meaning of teaching excellence as 'protean' (Land and Gordon 2015, p. 3).

This debate emerges in the context of discussions around the relationship between excellence in teaching and excellence in learning; the evolution and diversification of academic roles; and the links between teaching and research performance and recognition processes (Gunn and Fisk 2013). In practice, the lack of clarity in conceptualisations of quality and impact in teaching has resulted in myriad initiatives across the higher education sector aimed at developing and rewarding excellence in teaching, which employ contrasting modalities and pursue different objectives (Land and Gordon 2015). This report, and the discussion on defining and demonstrating 'quality teaching' more broadly, is particularly timely given the imminent roll-out of the Government's Teaching Excellence Framework (TEF), which intends to assess and monitor 'quality teaching' for all higher education students in England, and at participating institutions in Northern Ireland, Scotland, and Wales. It will likely have a significant impact on teaching practice in the sector.

This report is accompanied by a dataset on literature found in this review, entitled 'The searchable teaching quality literature dataset'. This dataset is divided into two tabs: one tab for the literature that was cited in this review, and a second tab for the literature that informed this review. Both tabs contain the bibliographic information of all the literature contained therein. In addition, the tab for the literature cited in this review also contains information on what relevant themes are covered in each paper, as well as the national context(s) to which the paper refers.

Method overview

The research team conducted a rapid evidence assessment using a systematic search of several databases, snowball searches and other methods, in order to find as many relevant studies as possible in the time available. The initial inclusion criteria were: any comparison group studies on students attending any higher education establishment in the UK or countries proposed by the HEA for their recent research activity and initiatives on 'quality teaching'. The intervention was defined as any 'quality teaching' initiative, and the results of the intervention were compared to the same (e.g. comparing results before and after the intervention), or similar students who have not experienced the initiative. Any relevant student-based outcomes were deemed suitable for inclusion. Following a systematic search of several relevant databases applying these criteria, no includable studies were found. Therefore, the inclusion criteria were relaxed to include studies that did not use a comparison group. The specific literature review methods used, such as search terms and databases searched, are presented and justified in more detail in Appendix 1 of this report.

Overall findings

Firstly, the lack of robust empirical evidence found by this review must be acknowledged, with the literature dominated by opinion pieces based on secondary, documentary analysis rather than rigorous comparison group studies. This weak evidence base may be partly explained by the relatively narrow timeframe for the review, as well the limited number of countries on which the review is focused at the request of the HEA (primarily the UK, Australia, and Germany). However, the review of the literature over the course of this research points to a lack of a body of evidence for notions of 'quality teaching' across higher education more broadly. This is a significant weakness in the field of research.

The report also examines the major themes from this discourse emerging from the literature at three levels. Firstly, after an overview of definitions of 'quality teaching' found in the literature, the report looks at how it is demonstrated or operationalised through the *student experience*, with indicators such as social integration, freedom of choice and level of student participation. Secondly, the report looks at *teacher performance* through prerequisites including teacher competence and qualifications, and through implementation, such as teaching methods, materials and curriculum design. Thirdly, the report looks at 'quality teaching' at the *institutional level*, through prerequisites such as funding and resources, the learning environment and student guidance available, and through implementation such as the availability of a wide variety of subjects, community involvement, and quality management processes. Finally, we examine how 'quality teaching' and impact are currently *measured* in the sector. Indicators used in these analyses include student test scores, student satisfaction and experience surveys, employer feedback on new graduates in their employ, and student outputs such as retention and pass rates, as well as knowledge, skills and capability of graduating students. However, we find that while there is considerable overlap in the literature on how quality teaching and its impact may be measured, there is a striking lack of evidence behind the indicators used by researchers and HEIs, meaning that it is currently difficult to assess whether these indicators can accurately measure 'quality teaching'.

The table below sets out the indicators found in the literature on how 'quality teaching' is demonstrated or operationalised at the student, teacher and institutional level, as well as the quality of evidence found in the literature for the applicability of these indicators for the purpose of measuring 'quality teaching'.

Mapping of indicators used in the literature to operationalise 'quality teaching'		
Quality teaching level	Indicators found in the literature review	Quality of evidence in literature for use of indicator ¹
Student experience	Social experience and development	Weak
	Degree and quality of participation	Weak
	Extent to which students feel challenged	Weak
Teacher performance	Competence and expertise	Medium
	Formal qualifications	Weak
	Ability to inspire and engage	Weak
	Respect and care for students	Medium
	Contribution to their profession (innovation)	Weak
	Teaching methods	Weak
	Self-monitoring	Weak
	Curriculum design	Weak
	Usefulness of subject matter	Weak
	Availability to students	Medium
Institution	Administrative and financial management	Weak
	Funding and facilities	Medium
	Teaching facilities	Medium
	Well adapted learning environments	Weak
	Availability of and equal access to student guidance and support services	Weak
	Equitable treatment of faculties	Weak
	Availability of teaching training	Weak
	Community involvement	Weak
	Employer engagement	Weak
	Communication with staff and students	Medium
	Extra-curricular activities	Medium
	Rewards for quality teaching	Weak

¹ Research team's appraisal of the quality of the evaluation: Weak quality is coded when no empirical investigation is conducted while circumstances would allow for a more thorough methodological assessment to answer key impact evaluation questions. Medium quality is coded when empirical data is collected but the circumstances would allow for a more advanced data collection, such as a comparison group. High quality is coded when empirical data is collected using a multi-method approach using multiple instruments, including comparison groups.

Summary of recommendations

The findings from this literature review on how higher education 'quality teaching' and its impact is defined and demonstrated clearly point to a need for more implementation research; that is, testing theories about how to operationalise and measure 'quality teaching' through implementing practical initiatives and monitoring the results. However, before this research can be conducted, more consensus, or at least constructive discussion, is needed on a number of key points. Firstly, more of a shared understanding must be established on the notion of 'quality teaching' in higher education, and the goals and priorities of HEIs themselves, and how these elements must be harmonised. Secondly, there needs to be more consensus in the discourse on how 'quality teaching' may be measured or evaluated. On the basis of the findings in this report, we recommend that the indicators set out in this document be used as a starting point for this process, with a first step to work with stakeholders in higher education to examine how these indicators interact with each other. With more discussion and analysis of these questions, researchers, policy makers and practitioners would be better placed to ordinally rank by importance the outcomes of 'quality teaching' in higher education, such as those set out in this report. With this foundation, 'quality teaching' interventions could then be developed and evaluated, providing the implementation research that is currently lacking in this field.

2 Introduction

The Higher Education Academy (HEA) recently noted that the importance of 'high quality teaching' in higher education (HE) is becoming increasingly emphasised both in the United Kingdom (UK) and abroad, as the 'knowledge society' and global competition have strengthened (Land and Gordon 2015). Excellence in teaching has become entrenched in higher education policy and in the educational strategies of academic institutions, and increasingly linked to the performance and assessment of these institutions (Skelton 2005). In the UK, organisations such as the Higher Education Funding Council for England (HEFCE) and the Quality Assurance Agency for Higher Education (QAA) provide oversight for the more than 200 higher education providers, with less formal assessment of standards emerging from tools such as university league tables. Despite this, debates remain – and indeed have intensified in recent decades – over what 'quality', 'excellence' and 'impact' in relation to teaching really mean (Land and Gordon 2015). Indeed, research has suggested that conceptions of 'quality teaching' and the understanding of its purpose remain varied, with one report describing the meaning of teaching excellence as 'protean' (Land and Gordon 2015, p. 3).

This debate emerges in the context of discussions around the relationship between excellence in teaching and excellence in learning; the evolution and diversification of academic roles; and the links between teaching and research performance and recognition processes (Gunn and Fisk 2013). Notions of defining and demonstrating 'quality teaching' and its impact are, therefore, perhaps necessarily complex, a point elaborated upon in the seminal report *Excellence in teaching and learning: a review of literature for the Higher Education Academy* (Little *et al.* 2007), which has informed much of the debate since its publication. This and other reviews have examined the ambiguities and lack of sophistication in definitions of quality and impact across the higher education sector. Indeed, much of the research has indicated a number of possible explanations for this state of affairs, including the differentiated nature of the higher education sector (*Ibid*). In practice, the lack of clarity in conceptualisations of quality and impact in teaching has resulted in myriad initiatives across the higher education sector aimed at developing and rewarding excellence in teaching, which employ contrasting modalities and pursue different objectives (Land and Gordon 2015).

The aim of this literature review is to identify and summarise the key trends and issues in the literature on how 'quality teaching' and its impact are currently being defined and demonstrated at higher education institutions (HEIs). Although evidence on the impact of these approaches is relatively weak, the research team nonetheless hopes that the review will inform practitioners, policy makers, and researchers aiming to better understand the current state of the discourse on 'quality teaching' in higher education, particularly in light of the current development surrounding the Teaching Excellence Framework (TEF) in the UK. The research team also hopes it will encourage further research, analysis and evaluation of approaches to the issue.

This introduction (section two) includes an overview of the issues surrounding this discourse. Specifically, the emergence of 'quality teaching' as an issue of pressing concern in higher education has been shaped by political, economic and social forces, which must be considered in any examination of the subject. This is the focus of section 2.2. of the

introduction (on the political and social context of the debate on 'quality teaching'). The report then reflects on the challenges of engaging in this debate, such as the multiplicity of conceptions of teaching excellence, the variations between academic disciplines, and the increasing diversification of academic roles. Thirdly, the introduction discusses the distinctions made in the literature in how 'quality teaching' is defined and demonstrated at institutional and programme level, and at the individual teacher level. Finally, it examines some of the key criticisms of the notion of 'quality teaching' in the literature: as a costly and time-consuming measurement activity; as simplistic and mechanistic; and as a device used by governments to justify a 'user-pays' approach to higher education.

In section three we present the key findings emerging from the review of the literature. In presenting these findings, we must acknowledge that there is a lack of robust empirical evidence, with the literature dominated by opinion pieces based on secondary, documentary analysis rather than rigorous comparison group studies. This weak evidence base may be partly explained by the relatively narrow timeframe for the review, and the limited number of countries on which the review is focused. However, the review of literature on 'quality teaching' in higher education over the course of this review points to a lack of a body of evidence behind notions of 'quality teaching' across higher education more broadly. This is a significant weakness in this field of research. The report then turns to how 'quality teaching' is defined and demonstrated, commencing with a brief overview of the key terms and concepts found in the literature.

The report also examines the major themes from this discourse emerging from the literature at three levels. Firstly, the report looks at defining and demonstrating 'quality teaching' through the student experience, with indicators such as social integration, freedom of choice, and level of student participation. Secondly, the report looks at teacher performance through prerequisites including teacher competence and qualifications, and through implementation, such as teaching methods, materials and curriculum design. Thirdly, the report looks at 'quality teaching' as an organisational strategy, through prerequisites such as funding and resources, the learning environment and student guidance available, and through implementation such as the availability of a wide variety of subjects, community involvement, and quality management processes. Finally, we examine how 'quality teaching' and its impact are measured. Indicators used in these analyses include student test scores, student satisfaction and experience surveys, employer feedback on new graduates in their employ, and student outputs such as retention, pass rates and progression to employment or further study, as well as knowledge, skills and capability of graduating students.

In section four ('Reflections and provocations') we reflect on the key issues, trends, questions and sources of evidence emerging from the literature review. The section also makes recommendations for future research on the topic.

2.1 Brief overview of methods employed in this literature review

The research team conducted a rapid evidence assessment using a systematic search of several databases, snowball searches, and other methods, in order to find as many relevant studies as possible in the time available. The initial inclusion criteria were: any comparison group studies² on students attending any higher education establishment in the UK or comparable countries. The intervention was defined as any quality teaching initiatives, and this was compared to same or similar students without the initiative. Any relevant student-based outcomes were deemed suitable for inclusion. Following a systematic search of several relevant databases with these criteria, no includable studies were found. Therefore, the inclusion criteria were relaxed to include studies that did not use a comparison group. Specific literature review methods such as search terms and databases searched are presented and justified in more detail in Appendix 1.

2.2 Political and social context of the debate on 'quality teaching'

Pitman (2014) notes in his analysis of the impact of policies of mass education in Australia, "whilst the word 'quality' in higher education has worth, it is meaningless when presented out of context" (p. 359). Therefore, we have sought to examine the literature to uncover some of the political and social forces that are shaping the current discourse on 'quality teaching'.

Firstly, we must acknowledge that research excellence has historically dominated the higher education agenda, particularly in relation to how the overall quality of HEIs is judged and teachers are rewarded. In addition, more consistent attempts have been made to quantify research activity in terms of quality and impact, in comparison to teaching (Bamber and Anderson 2012; Manville *et al.* 2015a, 2015b; Morgan Jones *et al.* 2013). The legacy of this lack of rigorous analysis of the impact of teaching at the higher education level is still felt in the sector today, despite increasing pressure from governments and other stakeholders for HEIs to demonstrate the value of their educational activities. Indeed, the Department for Business, Innovation and Skills (BIS) Green Paper, *Fulfilling our potential: teaching excellence, social mobility and student choice* (2015), expressed the view that:

Currently, not all universities assign teaching the same significance that they give research. Significant funding is allocated through the Research Excellence Framework (REF) to universities who deliver high quality research. There is no mechanism in place to reward teaching, resulting in a lack of focus on providing a high quality student experience. (BIS 2015, p. 12)

Secondly, Bergseth *et al.* (2014) remark on the growing complexity in the structure of HEIs, with diminishing boundaries between different disciplines and learning institutions. This is compounded by the globalisation of higher education, and the expanding level of access to institutions of learning by a diverse range of potential students. This has, in turn, led to an increasingly competitive industry with increasing demand for information

² Studies that would fall under this category would include, for example, randomised controlled trials, matched comparison studies and before-and-after studies.

about the quality of education students may expect to receive from their HEI (Thompson-Whiteside 2013). Furthermore, the expansion in higher education participation and enrolment, and the associated increase in costs, mean that HEIs are increasingly asked to assure quality-learning outcomes for students. This in turn leads to a stronger need for comparable and objective measures of 'quality teaching' (Lodge and Bonsanquet 2014).

A number of national and international initiatives have also had impact on the debate on 'quality teaching'. For example, the 1999 Bologna Process brought together public authorities, HEIs, teachers and students, among other stakeholders, and sought to increase compatibility between education systems across the European Union (EU) and to help to make European universities and colleges more competitive and attractive to students across the world. These reforms introduced many HEIs to notions of qualification frameworks, learning outcomes, and internal and external quality assurance (High Level Group on the Modernisation of Higher Education 2013). In the UK, the Government is in the early stages of implementing its Teaching Excellence Framework (TEF). According to the BIS Committee report, 'The Teaching Excellence Framework: assessing quality in higher education' (2016), the intended purposes of this policy initiative are to (p. 5):

- > encourage excellent teaching for all students;
- > promote improvement by highlighting exemplary practice;
- > promote cultural change to recognise teaching as equal in status to research;
- > provide clear information on teaching quality to assist student choice;
- > provide clear information to help employers recruit students with better and known skills;
- > recognise and respect the diversity of provision and different types of excellence.

The metrics by which 'quality teaching' will be measured in the TEF, and its implications for further research in this field, will be discussed further in section four of this report.

2.3 The complexity of 'quality teaching'

Any examination of key trends and issues in how 'quality teaching' is defined and demonstrated must take into consideration the complexities that shape and often hamper the debate on the subject. This section reflects upon some of the key issues that pose challenges for both researchers and academic institutions in attempting to define 'quality teaching' and establish indicators by which to measure its impact.

According to the Organisation for Economic Co-operation and Development (OECD) report *Fostering quality teaching in higher education: policies and practices* (Henard and Roseveare 2012), notions of quality in higher education are necessarily varied across disciplinary settings: indicators of 'quality teaching' in an Engineering faculty might be of limited applicability to a Philosophy department, for example. Rather, the report, argues, initiatives of 'quality teaching' are intimately connected to and reflect the specific objectives and traditions of the particular institution and faculty implementing them (Henard and Roseveare 2012). Gunn and Fisk (2013) appeal for more research on the manner in which disciplinary influences impact on how 'quality teaching' is defined, and on the similarities and differences in "teaching-focused problem solving" in different disciplines (p. 36). The OECD report also touches on some of the contextual shifts that are influencing notions of 'quality teaching' in the higher education sector. These include the

growing internationalisation of higher education and increasing pressures of global competition and efficiency. Relatedly, the OECD notes the broadening scope of higher education and greater diversity in student bodies. Increasingly, students are enrolling in higher education from a variety of socio-economic backgrounds, with higher numbers of mature students; HEIs must continually adapt to reflect and meet the needs of their student body.

Additionally, the rapidly evolving technology available to both students and teachers has increased the pace of change in curriculum content and pedagogic approaches, placing ever more pressure on teachers and administrators to match progress in higher education. The OECD report also reflects upon the challenges of producing a skilled workforce that is prepared for the 21st century, noting that the demands of the labour market have changed radically over the past 50 years. While formerly cognitive and trade skills, physical strength and capacity to undertake repetitive physical tasks were in strong demand by employers, more recently, inter-personal skills and non-routine cognitive skills such as public relations or financial analysis, for example, are of greater value in the labour market. The report suggests, therefore, that HEIs must continually adapt to prepare their students for a fast-paced, complex and inter-disciplinary workplace (Henard and Roseveare 2012).

Furthermore, Brockerhoff *et al.* (2014) also note that while the multiplicity of conceptions of 'quality teaching' may present HEIs with the flexibility to reflect the complexity of this concept, the authors also point to the risk that, in this ambiguity, the term may lose meaning. Cashmore *et al.* (2013) add to this discussion an acknowledgement of the different, and at times competing, goals that HEIs are striving to meet. Among these are the demands of generating income (increasingly from student fees, but also from research grants and other sources of income in the face of diminished financial support from governments); enhancing their research activity, which, as noted elsewhere in this review, has historically been the backbone of the institution's reputation and prioritised over teaching by administrators; and providing instruction and training for students. On this latter point, for example, Brusoni *et al.* (2014), in their Occasional Paper, quote a European expert on higher education, Hasan Komurcugil, former Board Member of the Higher Education, Planning, Evaluation, Accreditation and Coordination Council (YODAK), as saying that a major objective of these institutions is the education of people on a large scale and the mass dissemination of knowledge. Cashmore *et al.* (2013) suggest that these goals may be at times incompatible, and the stratification of the roles of HEIs means that policies and rules which impact on, for example, the advancement of quality teaching, may have been composed at different times, by different people, with differing priorities.

Other challenges posed in discussion on 'quality teaching' are canvassed by Gunn and Fisk (2013), in their literature review on the research conducted on university teaching excellence since the publication of the seminal report by Little *et al.* (2007), *Excellence in teaching and learning: a review of literature for the Higher Education Academy*, more commonly referred to as the 'Cheri report'. In particular, Gunn and Fisk point to how the role and performance of teachers reflect the career stage of the teacher: how 'quality teaching' may be defined for teachers at the start of their career as well as for those who are more advanced in their career in a way that is meaningful. The report also examines the increasing diversification of academic roles: teachers are often pushed into niches

such as research-intensive specialists or teaching-focused, reflecting the stratification within higher education. Gunn and Fisk also report on the widening expectations and ranges of responsibilities placed on teachers, with pressures going beyond their teaching impact and including a strong track record in research activity, their performance in forging collaborations with national and international counterparts, and demonstrating leadership in their institution and their field.

How students and alumni perceive teaching excellence is also of import in this discussion, particularly given the emphasis on canvassing student views on the quality of the education they have experienced as a method by which 'quality teaching' can be measured. The expectations of these stakeholders may be dissonant from the expectations of HEIs and policy-makers, and may evolve to reflect changes in educational trends (Gunn and Fisk 2013).

2.4 Quality teaching on individual and institutional levels

A distinction is frequently made in the literature on 'quality teaching' at the institutional, programme, and individual levels. On an individual level, indicators for 'quality teaching' emerge from sources such as teaching awards, criteria for promotion and individual teaching excellence initiatives (see e.g. Land and Gordon 2015). Reflecting the lack of content in the literature captured in this review, the review contains rather limited consideration of 'quality teaching' at the programmatic level, and such content that is included is therefore folded into the analysis of 'quality teaching' on the institutional level. Discussions on 'quality teaching' at this level are derived from multiple sources as outlined below.

A number of countries have established national recognition initiatives for stimulating teaching excellence in higher education. For example, Germany's 'Competition for Teaching Excellence' in 2010, invited HEIs to apply for the status of "excellent teaching institutions" based on their achievements and their plans for the future (Brockerhoff *et al.* 2014). In addition, a report produced for Higher Education Funding Council for England (HEFCE) by Clarke and Lunt (2014), *International comparisons in postgraduate education: Quality, access and employment*, noted similar competitions in Norway and Spain, in which additional funding is provided to universities which can establish that they have met certain criteria of excellence. According to the authors of this report, the motivation behind this competition was to create a stratum of 'elite' universities that can compete on a global scale with other HEIs in international rankings.

Accreditation by governmental or independent agencies also involves meeting indicators for 'quality teaching', and the accreditations they provide are also used by universities as an indicator of quality teaching in itself. Such agencies include, for example, Australia's Tertiary Education Quality and Standards Agency, which is an independent statutory authority established in 2011. This Agency regulates and evaluates the performance of higher education providers against the Australia's Higher Education Standards Framework.

International and national university league tables utilise a variety of indicators to rank HEIs in terms of their teaching (and research) activity. Systematic ranking of universities commenced with the publication of the US News and World Report in 1983, which sought to compare the quality of American universities. Subsequently, the number of

organisations and agencies preparing such rankings, or league tables, has proliferated, produced most commonly by newspapers and magazines, professional societies, civil society organisations, and governmental agencies: in Australia, *The Good Universities Guide*; in Canada, *The Maclean's Guide to Canadian Universities*; and in the UK, *The Times Good University Guide* and the *Guardian University Guide*. In terms of international comparisons, the 'Academic Ranking of World Universities', which is carried out by China's Shanghai Jiao Tong University, and the UK's 'Times Higher Education World University Rankings' are two of the most widely regarded.

Universities often use their ranking within these tables as an indicator of overall institutional quality, including 'quality teaching'. However, university league tables often struggle with credibility among academics, and Bergseth *et al.* (2014) note that of these rankings, only a few use results of quality assessments, accreditation activities or evaluations conducted by public sector bodies. Forneng *et al.* (2014) suggest that league tables are therefore produced primarily as a commercial exercise rather than as credible, unbiased and rigorous evaluations. Furthermore, different organisations include different quality indicators in their assessments, and weigh them differently. This reflects the lack of international consensus on the definition of quality higher education and results in a variety of contrasting findings, leading the burden of interpreting the outcomes on the ranking user (Bergseth *et al.* 2014). In the UK context, Boliver (2015) who used cluster analysis of publicly available data on the 'quality teaching', financial resources, research activity, and academic selectivity of British universities to assess their status as institutions of higher education, notes that the Higher Education Statistics Agency (HESA)—which is the primary source of the data used in ranking systems of British UK universities—has declared its opposition to its data being used in this manner. It is also worth noting that many rankings systems include research activity, income and impact in their assessments of the quality and status of HEIs, rendering their value as a source for measuring 'quality teaching' somewhat limited and fraught with caveats.

This distinction between individual and institutional 'quality teaching' will further inform the discussion on how quality is demonstrated and operationalised in section three of this report.

2.5 Criticisms of the discourse around 'quality teaching'

Although the discourse around 'quality teaching' is becoming more established, criticisms of approaches to its definition and to its operationalisation recur in the literature. Some commentary (e.g. cited in Brokerhoff *et al.* 2014) posits the view that the pressure on HEIs to demonstrate 'quality teaching' merely results in costly and time-consuming measurement and evaluation activities which may conflict with teachers' core duties. Other commentators report complaints by critics that approaches to demonstrating 'quality teaching', for example, requirements that teachers gain qualifications and have access to continued professional development schemes, are based upon mechanistic and simplistic assumptions that such qualifications automatically signify that their teaching is of the appropriate standard. Thornton (2014) cites critics who argue that these approaches are simply pushing a neo-liberal agenda and a culture of managerialism.

Still another criticism in the literature is that governments are using notions of quality to justify a 'user-pays' approach to higher education, and place the burden on students to provide the financial resources to improve teaching and behaving more as a consumer than a teacher, in order to pressurise HEIs to continually improve (Pitman 2014). These criticisms reflect and may partly explain the lack of consensus in this area, and must be acknowledged in a review of the discourse.

3 Findings and mapping

With our relaxed inclusion criteria, we established a list of 91 papers to be included in the review. Of these, 40 have been directly cited in this report, while 49 have informed the report by providing context to the issues discussed herein. The following sections provide an overview of the scale of the available research in the field; the evidence on how 'quality teaching' is defined and demonstrated in higher education at the student, teacher, and institutional level; and how 'quality teaching' and impact is measured in the literature.

3.1 Mapping of research findings: how 'quality teaching' is operationalised

As noted in the introduction, the evidence base for research on 'quality teaching' in higher education is relatively weak, posing challenges for practitioners, researchers and policy makers in assessing the impact of approaches to the issue. The review focused primarily on countries agreed upon with the HEA, namely the UK, Australia, and Germany, although countries such as the US, Canada, and Sweden are also producing commentaries which are referenced in this report. Furthermore, the review captured relevant literature published only after 2012 in order to update an earlier review published by the HEA, *Considering teaching excellence in higher education: 2007-2013* (Gunn and Fisk 2013).

The most striking finding is the limited range of relevant empirical literature on the topic. The somewhat narrow inclusion criteria for this review may, at least in part, explain this paucity, along with HEIs' lack of evaluations of 'quality teaching' within their own institutions. Lodge and Bonsanquet (2014) describe the current quality of evidence on the subject as 'grossly inadequate' (p. 17).

The available research is mainly constituted by secondary, descriptive analyses of HEIs' policies rather than evaluations of interventions. Therefore, the strength of the evidence appears relatively weak and superficial, with correlations often resting on missing data and guesswork. In particular, there is a lack of rigorous comparison group studies, with only eight such evaluations found on often relatively niche areas of higher education. For example, Bersamin *et al.*'s (2013) relatively small study (involving 41 participants), 'Understanding course content through letter writing', sought to investigate whether students in an undergraduate child development course, who were given an informal writing assignment related to their course content, received improved marks in a subsequent exam. Future avenues for further research will be elaborated upon in the final section of this report.

There are some relevant interventions that have been analysed in the literature, such as government initiatives (see e.g. Brockerhoff *et al.* 2014) and award competitions (see e.g. Land and Gordon 2015; Cashmore *et al.* 2013). These interventions provide sources of indicators used by various institutions in measuring teaching impact, although analysis of the impact of these initiatives is typically lacking.

The available grey literature, for example, from the OECD (Henard and Roseveare 2012) and the European Commission (High Level Group on the Modernisation of Higher Education 2013), adds a sense of political, economic, and social context to the debate on 'quality teaching', but again lacks robust evidence for their findings and recommendations.

The table below sets out the indicators found in the literature on how 'quality teaching' is operationalised at the student, teacher, and institutional level, as well as the quality of evidence found in the literature for the fitness for purpose of these indicators in measuring 'quality teaching'.

Table 1: Mapping of indicators used in the literature to operationalise 'quality teaching'		
Quality teaching level	Indicators found in the literature review	Quality of evidence in literature for use of indicator ³
Student experience	Social experience and development	Weak
	Degree and quality of participation	Weak
	Extent to which students feel challenged	Weak
Teacher performance	Competence and expertise	Medium
	Formal qualifications	Weak
	Ability to inspire and engage	Weak
	Respect and care for students	Medium
	Contribution to their profession (innovation)	Weak
	Teaching methods	Weak
	Self-monitoring	Weak
	Curriculum design	Weak
	Usefulness of subject matter	Weak
	Availability to students	Medium
Institution	Administrative and financial management	Weak
	Funding and facilities	Medium
	Teaching facilities	Medium
	Well adapted learning environments	Weak
	Availability of and equal access to student guidance and support services	Weak
	Equitable treatment of faculties	Weak
	Availability of teaching training	Weak
	Community involvement	Weak
	Employer engagement	Weak
	Communication with staff and students	Medium
	Extra-curricular activities	Medium
	Rewards for quality teaching	Weak

³ Research team's appraisal of the quality of the evaluation: Weak quality is coded when no empirical investigation is conducted while circumstances would allow for a more thorough methodological assessment to answer key impact evaluation questions. Medium quality is coded when empirical data is collected but the circumstances would allow for a more advanced data collection, such as a comparison group. High quality is coded when empirical data is collected using a multi-method approach using multiple instruments, including comparison groups.

3.2 How is 'quality teaching' demonstrated/operationalised?

This section commences with a short introduction to the concepts and terms used in discussions on 'quality teaching' and its impact focusing on how these key characteristics are uncovered in the literature review. These definitions can be found in, for example, Brusoni *et al.* (2014), Gunn and Fisk (2013), and Hoareau McGrath (2015). Following this overview of key concepts in how 'quality teaching' is defined, this section moves on to how these definitions are operationalised at the student, teacher, and institutional levels.

3.2.1 Definitions of 'quality teaching'

The multitude of definitions of 'quality' in relation to teaching found in the surveyed literature, even at times within the same document, reflects some of the complexities in the discourse referred to in section 2.2 of this review. Indeed, Brusoni *et al.* (2014), in their Occasional Paper *The concept of excellence in higher education*, quote Hasan Komurcugil, former Board Member of the Higher Education, Planning, Evaluation, Accreditation and Coordination Council (YODAK), as stating that the absence of an established definition of quality has engendered great difficulties in efforts to evaluate. This will be reflected and further explored later in this review. The paper's authors themselves offer a 'common understanding' of this concept of quality as "a mark of distinction, describing something that is exceptional, meritocratic, outstanding and exceeding normal expectations" (p. 20). They acknowledge, however, that this is a view to which not all commentators would subscribe, and indeed note that it can be seen as both relative and absolute in its definition. The authors canvas the views of four experts in higher education across Europe on defining this topic: Hasan Komurcugil; Josep Grifoll, Head of the Quality Assessment Department at the Catalan University Quality Assurance Agency; Orlanda Tavares, Researcher at the Portuguese Agency for Assessment and Accreditation of Higher Education; and Marie Malmedy, Project Coordinator at the executive unit of the Quality Agency for Higher Education in the French-speaking Community of Belgium. Josep Grifoll states that the form of any such definition of quality would necessarily depend on the person defining it, and their agenda behind doing so. This expert suggests that a 'classic' definition of the concept relates to:

the fulfilment of a certain standard. This could be interpreted as fitness for purpose. This is a measure of performance according to a predefined set of standards. (Brusoni *et al.* 2014, p. 21).

This definition naturally begets further questions around how 'standards' are defined, and the very 'purpose' of higher education, which remain largely unanswered.

Given this complexity, it is perhaps not surprising that Pitman (2014) argues that many HEIs have moved away from attempting to define 'quality teaching' and have instead focused on attempting to measure it. This point is echoed in the BIS Committee's 'Assessing Quality in Higher Education' inquiry, which was launched in September 2015, before the publication of the Government's 2015 higher education Green Paper, *Fulfilling our potential: teaching excellence, social mobility and student choice*. This Green Paper set out proposals to, among other things, introduce the Teaching Excellence Framework

(TEF), a framework for monitoring and assessing the quality of teaching in England.⁴ In 'The Teaching Excellence Framework: assessing quality in higher education', the BIS Committee stated:

There is no commonly agreed definition of what constitutes good teaching in higher education ... In the absence of any agreed definition or recognised measures of teaching quality, the Government is proposing to use measures, or metrics, as proxies for teaching quality. Therefore the challenge is to identify those metrics which most reliably and accurately measure teaching quality, as opposed to other factors that contribute to the results achieved by students. (BIS 2015, pp. 5-6).

This emphasis on measurement, both in the policies of HEIs and the British Governments, and the literature emerging from this review are reflected in section 3.3 ('How is 'quality teaching' measured?').

3.2.2 Student experience

Much of the literature included in this review examines student-centred approaches to demonstrating and/or operationalising 'quality teaching'. These indicators include the social experience of higher education; the degree and quality of student participation; and the degree to which students feel challenged.

Some key elements in this discourse focus on the social component of the student's education. For example, Brockerhoff *et al.* (2014) include the degree of autonomy and freedom of choice experienced by students; their level of social integration; the students' level of self-responsibility; and students as academic partners with their institution as indicators of 'teaching quality'. However, this article focuses more on how institutions participating in a national 'Competition for Teaching Excellence' in Germany define and demonstrate 'quality teaching', and on the whole does not attempt to evaluate their approach. Similarly, in Douglas *et al.*'s (2015) survey of student satisfaction at two UK business schools, 'social inclusion', that is, the forging of new relationships with their peers and feeling a sense of belonging at their institution, was included as a critical determinant of 'quality teaching'.

Student progression through their degree course, and the degree and quality of student participation in their course and their HEI, especially to those under-represented in higher education, also emerge as indicators of the operationalisation of 'quality teaching' in Pitman's (2014) overview on conceptualisations of 'quality teaching' in Australia. Again, this paper is not an evaluation and does not provide empirical evidence on the use of these indicators.

Finally, the degree to which students feel challenged, are exposed to high standards, and encouraged to strive for high ambitions, and are socialised within the student body are

⁴ Devolved administrations in Scotland, Wales, and Northern Ireland have given consent for their HEIs to participate in the first year of the TEF if they so choose. It will be the decision of these administrations as to whether their institutions will participate in the TEF's later years.

also considered in Martensson *et al.*'s (2014) analysis of 'microcultures' in teaching as a mode in which 'quality teaching' is reflected in the student experience.

3.2.3 Teacher performance

This section is divided into two parts: the perceived prerequisites for operationalisation of 'quality teaching', that is, the skills considered to be required of the teacher to provide 'quality teaching'; and the implementation of 'quality teaching' in practice, as evidenced through the literature review. This is modelled on an approach referred to in Bergseth *et al.*'s (2014) analysis of ranking systems of Swedish HEIs.

Prerequisites for 'quality teaching'

The literature review uncovered a number of perceived prerequisites to the operationalisation of 'quality teaching', such as teacher competence; teacher qualifications; teachers' ability to inspire; and teachers' respect and care for their students.

In particular, several pieces of literature refer to teachers' competence or expertise. Ahmad's 'Evaluating student satisfaction of quality at international branch campuses' (2015), is one of the few pieces of literature captured in this review which uses empirical evidence, collected through survey questionnaires and semi-structured interviews of undergraduate and postgraduate students at international branch campuses of foreign universities, such as Australia's Monash University and the UK's Southampton University. In the study design, the author primarily relied upon a service quality measurement scale called SERVPERF, modified for its application in the context of higher education, and augmented by scales used in relatively recent studies on service quality and student satisfaction. A number of the independent variables of 'quality teaching' measured in this paper relate to the teacher's expertise in their subject matter, and, concomitantly, teachers' academic preparation for classes, and make the subject interesting and intellectually stimulating to students. Of particular relevance to teachers working in foreign universities based abroad, the author also cites Wilkins, Balakrishnan and Huisman (2012) in noting that expertise extends beyond subject knowledge to the application of this knowledge to the local context.

Bergseth *et al.*'s (2014) analysis of university league tables also includes 'teacher competence', including in clinical education, as a prerequisite for the operationalisation of 'quality teaching', although the authors do not provide further elaboration on how this is measured. Gunn and Fisk (2013) also touch upon teacher expertise, or knowledge of their subject, in their literature review of research on teaching excellence in higher education. The authors comment that while subject expertise is an indicator commonly found in the literature, it is not easily defined in practical or general terms beyond individual disciplines.

The formal qualifications earned by teachers, as well as the further formal professional development they have undergone, is increasingly perceived by policy makers and HEIs as a key indicator of 'quality teaching' (High Level Group on the Modernisation of Higher Education 2013). Cashmore *et al.* (2013) also make reference to teachers participating in training and professional development programmes as relevant indicators for demonstrating 'quality teaching'. However, the OECD (Henard and Roseveare 2012) note that there is a paucity of evidence on the impact of professional development courses on the quality of teaching, meaning that reliance on such an indicator carries risk.

Gunn and Fisk (2013) also trace the emergence of teachers' ability to inspire and engage with their students as a criterion in teaching awards recognising excellence. This may be reflected in "presentation skills, creative use of resources and a passion for teaching the discipline that is frequently referred to in the award criteria as 'enthusiasm'" (p. 26). The authors go on to quote the criteria used by the Australian Teaching Excellence Awards as referring to "influencing, motivating and inspiring students to learn" including "encouraging student engagement through the enthusiasm shown for learning and teaching; inspiring and motivating students through high-level communication, presentation and interpersonal skills" (*Ibid*). Somewhat relatedly, Gunn and Fisk also include the teacher's respect and care for their students, and awareness of issues linked to equality and diversity, including in relation to gender, ethnicity, sexuality, and other factors, as part of 'quality teaching'. Similarly, in Douglas *et al.*'s (2015) survey of student satisfaction at two UK business schools, one of the critical determinants of quality related to the 'attentiveness' of teaching staff: their willingness to provide their students with help, and to demonstrate their interest in the student.

Implementation of 'quality teaching'

There is considerable overlap in the literature on ideas around how 'quality teaching' may be implemented by teachers in the higher education sector, and these key themes may be readily grouped and linked together. Some of these themes include teachers' contribution to their profession, including 'innovation'; methods of teaching; teachers' self-monitoring; quality teaching materials; curriculum design; and the availability of the teacher. However, it bears repeating there is little evidence contained in this literature that links these indicators to positive outcomes for students.

Teachers' contribution to their profession emerges in the literature as a demonstration of 'quality teaching'. For example, this may refer to teachers sharing best practice with their peers, through peer engagement and review, mentoring or research on teaching and learning, to assist their colleagues in improving as teachers (Gunn and Fisk 2013). Cashmore *et al.* (2013) also include the impact of a teacher's pedagogic research as a criterion by which teachers in higher education may be assessed for promotion on the basis of their teaching performance. In particular, innovation emerges in the literature as a mode of such a contribution. Cashmore *et al.* refer to "involvement in, or development of, new modules and teaching materials" (p. 32) as another criterion, going on to add that the impact of this innovation in teaching methods and materials employed should also be considered by institutions in deciding whether to promote their academic staff. Gunn and Fisk (2013) report that 'innovation' is included as a criterion for teaching awards in numerous schemes in HEIs around the world. They note that references to innovation are found in relation to the delivery, assessment and feedback, and evaluation conducted by teachers.

Similarly, the OECD, in their 2012 report *Fostering quality teaching in higher education: policies and practices*, describes innovation in higher education as searching for and providing solutions for challenges, and promoting learning through problem-solving by their students. The report goes on to note that that innovative teaching tends to involve experiments with alternative teaching practices and approaches to pedagogy, and may feature in the "content of the programmes offered, pedagogy, student support, student

assessment and/or the learning environment.” (p. 33) This includes subject-based innovation: teachers stimulating their students to adopt new perspectives on their course content, and encouraging the development of critical thinking, teamwork and technical or discipline-specific skills (Henard and Roseveare 2012).

Methods of teaching, and tutoring employed by teachers more broadly, are also included as criteria for judging ‘quality teaching’ in a number of university league tables covered in Bergseth *et al.*’s (2014) article on these ranking systems, although again, further elaboration on how these methods are assessed is lacking.

Teacher self-monitoring also emerges in the literature review. This can be demonstrated by teachers employing strategies to improve their practice, and analysing and incorporating signals from their institution, quality assurance procedures, students, and assessment results (Martensson *et al.* 2014). This is a theme also picked up by Gunn and Fisk (2013), who argue in particularly strong terms that the manner in which teachers engage in reflection on their own teaching practices, and how they respond to and incorporate feedback from peers and students, is key in demonstrating ‘quality teaching’. This is linked to teachers’ engagement with peer observation and review, which according to Gunn and Fisk may take three forms. Firstly, teachers may join with peers from their chosen discipline to undertake and document evidence of their development as educators, and to discuss the means by which they may continue to improve their teaching. Secondly, teachers may be paired with a colleague from their subject background to engage in and report on a peer review of teaching process. Thirdly, teachers may participate in a summative assessment of teaching practice that is focused on core criteria, such as exists at the National University of Ireland, Galway.

The High Level Group on the Modernisation of Higher Education considers up-to-date and good quality material for lessons as an approach to implementing ‘quality teaching’, although this paper does not produce an evidence base for its findings on this matter (High Level Group on the Modernisation of Higher Education 2013).

Curriculum design is also referred to in the literature as a factor related to teacher performance, particularly in reference to student-centred learning, whereby teachers guide the student in their own learning rather than simply impart knowledge. Examples of this approach include problem-based learning, and exposure to real-life situations and challenges (High Level Group on the Modernisation of Higher Education 2013). In Gunn and Fisk’s (2013) analysis of central themes found in teaching excellence awards, the authors refer to “the elucidation of intended learning outcomes, clearly communicated to students and delivered throughout the course in a well-structured way” (p. 25) as a manifestation of this indicator. They go on to state that the curriculum design must also reflect the teacher’s currency with up-to-date scholarship, and their awareness of the most important learning outcomes for their area of education and the particular needs of their student body. In the HEA’s case studies on quality learning initiatives in the US (Middlehurst *et al.* 2016), reference is made to a new curriculum process at Brandman University in California, which organised around three sets of learning outcomes: in general education, and at the institutional, and at programme levels. The learning outcomes in relation to the general education programme focus on basic skills such as written and oral communication and quantitative reasoning, breadth requirements (in the

Humanities, Natural Sciences, Social Sciences) and liberal education foundations. For the second set of outcomes, there are five competencies of which all graduates should meet: “applied learning; innovation and creativity; civic engagement; global cultures, and integrated learning” (p. 8). Finally, learning outcomes are defined at the programme level, with a set of learning outcomes relating to the skills for success in academic and work settings. On a similar note, Douglas *et al.* (2015) make reference to the ‘usefulness’ of the education that students experience. This may include the applicability of the subject matter or method of teaching to the workplace or to situations the student may well be expected to face in their life.

The availability of teachers to students also emerged in a number of papers as an indicator of ‘quality teaching’, particularly in works that used student feedback as a source for their research. In Ahmad’s (2015) research measuring student satisfaction, the author included as a survey question on the teacher’s willingness to assist students in their academic development, and how easily students can contact teachers as the need arises. In Douglas *et al.*’s (2015) survey of student satisfaction, teacher availability encompasses both the amount of time that teachers spend on their students, and the availability of educational resources. Likewise, the Student Academic Experience Survey, produced by the Higher Education Policy Institute (HEPI) and the HEA (Neves and Hillman 2016) revealed that students place a high degree of importance on the number of contact hours they received from their teachers. Indeed, Neves and Hillman’s analysis of the survey results leads them to conclude that many students prioritise contact hours over small class sizes. However, the authors go on to refer to earlier research (Gibbs 2010) which suggests that the link between the number of contact hours and educational quality is tenuous, regardless of the nature of the interactions between students and teachers during contact hours, or the pedagogical model employed by the teacher. Neves and Hillman report Gibbs’ position that in many cases, what students say that they want for their educational development is not supported by the evidence on how to operationalise ‘quality teaching’.

3.2.4 Quality teaching at the institutional level

Following the same structure employed above, this section includes findings from the literature on both the perceived prerequisites for operationalising ‘quality teaching’ at the institutional level – that is, what is required of the institution to constitute ‘quality teaching’ – and the implementation of ‘quality teaching’ by the institution in practice. This section also presents the emerging themes from the literature review.

Prerequisites for ‘quality teaching’

A number of key indicators emerged in the literature review on the perceived prerequisites at the institutional level for the operationalisation of ‘quality teaching’. Among these are the sound and strategic administrative and financial management processes of the institution; the funding and facilities offered by the institution; and the availability and effectiveness of student services and support.

Bergseth *et al.*’s (2014) analysis of Swedish university ranking models refers to a number of indicators employed by these systems as necessary prerequisites at the institutional level, although again without providing substantial detail of how these are measured, or an evaluation of these indicators. Broadly, these indicators include the sound

administrative management of the institution, including its decision-making structure and financial management, and the student admissions and selection process. Similarly, Brockerhoff *et al.* (2014) identify key themes emerging from their analysis of the university submissions to the national 'excellence' competition in Germany as including the structural linking of teaching to the institutional decision structure; the quality management processes at the institution; the development of a conceptual basis for the development of teaching; competence oriented education; and the feasibility of programmes. As noted above, however, this article focuses more on how participating institutions define and demonstrate 'quality teaching' rather than attempting to evaluate their approach.

The strategic framework and management processes under which higher education institutions operate were also referred to as indicators for 'quality teaching' on the institutional level in Brusoni *et al.* (2014). Their report provides rather more detail on how this would be manifested in practice, including decision-making on planning and resourcing, as well as more abstract qualities such as the institution's ethos and style. In addition, the report includes action on the part of both executive management and the institution's governing bodies to set goals for the advancement of 'quality teaching', and ensure that these actions are adequately supported.

Along the same lines, Udam and Heidmets' (2013) analysis on the understanding of what constitutes a 'good university' by various academic stakeholders in Estonia cursorily lists such indicators as, rather intangibly, the institution's strategic mission, institutional purpose and educational objectives, and coherence between them. The authors also include the sufficient funding and facilities provided by the institution per student and, relatedly, the number of study programmes available, and competitive teacher salaries on offer. Boliver (2015) examined the indicators used by the *Times* and the *Sunday Times* university rankings, which also referred to funding provided by HEIs for academic services and facilities. Funding is also an important factor in the providing a favourable ratio of students to staff (Boliver 2015; Bergseth *et al.* 2014) and teachers to professors, and the level of access to tutors experienced by students Bergseth *et al.* (2014). Ahmad (2014) refers to modern teaching facilities, and adequate physical infrastructure on the campus. Relatedly, Ahmad also includes the availability of technology as a learning resource as an indicator of 'quality'. In particular, the availability of online learning for students has also been considered in the literature as a method by which 'quality teaching' may be operationalised (High Level Group on the Modernisation of Higher Education 2013; Brockerhoff 2013).

In Douglas *et al.*'s (2015) survey of student satisfaction at two UK business schools, one of the critical determinants of quality in higher education is the physical ease of access to the institution, including the approachability of its location, and the ease with which students could move around their environment. The OECD's guide for HEIs in the *Institutional management of higher education* report also makes reference to well adapted learning environments, a topic which is also included in Macquarie University's Teaching Standards Framework. However, further information on how this is demonstrated and measured is lacking (Henard and Roseveare 2012). In addition, the availability of, and equal access to, student guidance and support services to help them to graduate, strengthen their connection to the institutions, and develop their individual and transversal

competences are also referred to by the High Level Group on the Modernisation of Higher Education (2013). This was echoed in Ahmad (2014), which surveyed students on their satisfaction with the student advice service, and counselling services available at their institutions.

Implementation of 'quality teaching'

The literature revealed a wide variety of indicators by which the implementation of 'quality teaching' at the institutional level may be operationalised. These include the equitable treatment of faculties across institutions; the institution's community involvement; the quality of its communication with students and staff; the extra-curricular activities on offer; the availability of rewards for teachers who deliver 'quality teaching'; and technological resources such as online learning programmes.

Brockerhoff *et al.* (2014) include in their study on the national 'Competition for Teaching Excellence' initiative in Germany the equitable treatment of faculties by the institution: incentives available for all teachers; a strong degree of academic freedom for faculties and departments; transparency of administrative processes and academic results; and minimal bureaucracy. Bergseth *et al.* (2014) also consider a number of ways in which 'quality teaching' may be operationalised at the institutional level. These include the availability of training, including theoretical and clinical training, for teachers.

Udam and Heidmets (2013), in their cursory overview of characteristics of "a good higher education", also consider the level of community involvement by the institution, and its co-operation with employers and other institutions. Somewhat relatedly, engagement with businesses, and, in particular, potential employers of graduates, may be considered an indicator at the institutional level. This can take the form of increasing graduate employability through traineeships, facilitating cross-sector strategic partnerships, or connecting educators, sector-specific experts and other relevant bodies to develop academic curricula that respond to demands of the labour market. However, while there has been some discussion in the academic literature on the impact of university–business collaborations within research and development, there have been fewer studies of teaching-related activities (Pavlin 2013). The degree of openness and communication that institutions display to staff and students was also included as such a characteristic by the authors. Likewise, Douglas *et al.*'s (2015) survey of student satisfaction at two UK business schools includes the institution's communication with students as a critical determinant of 'quality teaching' on the institutional level. To this end, the authors refer to the ability of the institution to communicate clearly, completely and accurately, both in written and verbal form. They also include the capacity of institution staff to understand the student's concerns, and to assure them that issues will be handled appropriately.

The High Level Group on the Modernisation of Higher Education's (2013) guide for HEIs suggests that such an environment may cover extra-curricular activities, for example, with volunteering, culture and the arts, sporting and leisure activities helping to develop soft skills and abilities. The availability of a high number of extra-curricular activities was also included as an indicator of 'quality teaching' in Ahmad's (2014) survey of student satisfaction at international branch campuses. The availability of preparatory courses so that prospective students are more informed about their academic choices has also been

included as an important input for operationalising 'quality teaching' (The High Level Group on the Modernisation of Higher Education 2013).

Rewards for quality teaching, such as adequate career and salary structures, and prizes for good teaching, are also included in the literature as a means by which institutions may demonstrate or operationalise 'quality teaching' (Land and Gordon 2015; Cashmore *et al.* 2013). Cashmore *et al.* note, in their review of measures to promote and recognise 'quality teaching' in the UK, that while research activity has historically been a major factor in teachers' promotions, salary and institutional recognition, a shift has more recently been detected towards including 'quality teaching' as a criteria for these rewards. The report does note, however, that there has been a lag between developing these policies and their successful implementation by HEIs; a discrepancy they suggest has been keenly felt by a majority of academic staff. Notwithstanding the slow pace of change, Cashmore *et al.* cite a number of initiatives that HEIs reviewed, developed and evaluated through one of the HEA's change programmes in 2012 as evidence of progress in developing teacher recognition systems. Furthermore, in their review of promotion policies using data gathered from the websites of 55 institutions, conducted in 2011, the authors found that there was overall evidence of an increased emphasis on teaching and learning in the criteria for promotion, in comparison to the state of affairs in 2009. The authors synthesised a number of criteria that might be typically found in an application for promotion in teaching; these are referred to next.

3.3 How is quality teaching and impact measured?

This final section examines how 'quality teaching' and its impact are measured in the literature. This discussion is particularly important given that Pitman (2014) argues that many HEIs have given up on attempting to define 'quality teaching' and simply moved on to measuring it. Indeed (as noted in section 3.2.1), this is also the position of the BIS. However, the literature review uncovered little evidence of robust evaluations of 'quality teaching' and its impact in higher education. Lodge and Bonsanquet (2014) suggest that it is not possible to objectively measure cognitive progress or the integration of new knowledge in students, so as a result, there is a reliance on phenomenographic techniques such as student and employer feedback forms. This is somewhat at odds with Brusoni *et al.*'s (2013) suggestion that the academic performance of students is an indicator of 'quality teaching', making particular reference to key skills such as the student's intellectual ability and their practical competence. Brusoni *et al.*'s report proposes the use of records of student performance and award of qualifications as evidence, which, as noted below, is generally found in the literature to be an unsatisfactory approach to measuring 'quality teaching', as well as the cognitive development of students. Other, more quantitative, approaches include indicators such as student test scores, retention rates and participation rates.

3.3.1 Student test scores

Higher education institutions have compared students' scores in commercially developed tests to previous student years and to the results of students from other HEIs. However, results of these assessments tend not to be publicly available nor produced by independent researchers, so any evidence supporting their use has not been captured in this review.

The discussion on the use of test scores to measure teaching impact includes a number of caveats. Firstly, these tests ought not to simply assess facts and student knowledge but rather measure the competence that the student has obtained as a result of the educational experience (High Level Group on the Modernisation of Higher Education 2013). Secondly, commentators warn that comparing students' generic attributes and skills across fields of study is problematic and potentially unconstructive (Lodge and Bonsanquet 2014).

Similarly, Cashmore *et al.* (2013) synthesised a number of criteria that might be typically found in an application for promotion in teaching. These include "high quality" examination results, although their review did not include further elaboration on how these might be weighted, for example, in comparison to a baseline of student performance, or in relation to complex subject matter.

3.3.2 *Student outcomes*

A range of both quantitative and qualitative measures for analysing the impact of quality teaching on a range of student outcomes is present in the literature, although again with limited discussions of how results of such evaluations have been used. This is particularly striking given the importance of student outcomes as an approach to measuring the impact of teaching. This will be considered further in section four.

Student retention, dropout, and rates, graduating students' employment rates, and widening student participation are all outcomes that were used for this purpose by Udam and Heidmets (2013) in their overview of characteristics of "a good higher education". Brusoni *et al.* (2014) also mention graduates' rate of employment or engagement in further education as an applicable outcome in this regard, referring to the national survey of students conducted by the UK's Higher Education Statistics Agency (HESA) six months after students graduate. The authors note that while this survey does not track the long-term professional course undertaken by graduates, it is useful in gaining an understanding of their more immediate employability. The Institute for Fiscal Studies has also researched the impact of HEIs attended on graduate earnings, although this research is not explicitly linked to the quality of teaching that the students experience (Britton *et al.* 2016).

The knowledge, skills and capabilities of graduates and students' personal growth through their higher education experience were all included in Thompson-Whiteside's (2013) assessment of academic standards in Australia, which refers to the notion of "quality as transformation" in this regard. However, as this was not an empirical study, no evidence emerged on the results of evaluating such outcomes.

It is important to note that the OECD has been working to add to the field of research on learning outcomes in higher education through the Assessment of Learning Outcomes in Higher Education (AHELO) project. A feasibility study was conducted between January 2010 and December 2012, with the aim of testing the feasibility of assessing the knowledge and ability of higher education students at their graduation, across a wide variety of national, cultural, linguistic and institutional contexts. Following the development of assessment frameworks and assessment instruments, and a proof of concept, the study was implemented in 2012, with the intention of analysing outcomes in generic skills common to all students (e.g. critical thinking, analytical reasoning, problem-solving, and

written communication skills), as well as discipline-specific skills in economics and engineering. The development of the main study is currently underway, with the analysis and reporting stage planned for 2020.

3.3.3 Student/alumni feedback – experience and satisfaction

There are a number of feedback surveys that canvas the views of students and alumni on their experience and satisfaction. These surveys are commonly used in the higher education sector to assess 'quality teaching', for example, the National Student Survey (NSS) in the UK. The NSS has surveyed final year students enrolled in publicly funded HEIs in England, Wales, Northern Ireland, and the majority of institutions in Scotland, every year since 2005. The literature review uncovered a number of examples or instances of the use of student feedback surveys as an indicator (or measure) of 'quality teaching', both in the literature captured in the review, and in institutions' policies and documents used as evidence in the literature.

For example, Boliver's (2015) analysis of university ranking systems notes that NSS results are a major component of the *Guardian University Guide*, augmented by the measurement of students' course performance with their qualifications gained prior to their enrolment in the HEI. Cashmore *et al.* also included "high quality teaching, often demonstrated through student feedback or peer review" (2013, p. 32) as a typical criterion for promotion on the basis of 'quality teaching'.

In a 2014 report by the HEFCE, entitled the *Review of the National Student Survey*, authors Callender *et al.* stated that of the numerous purposes of the NSS, two in particular dominate. Firstly, the NSS is used by prospective students to inform their choice about higher education, by providing them with the tools to examine how courses and institutions compare, and how current students feel about the level of teaching and learning that they are experiencing. Secondly, the NSS may be used to support quality enhancement in institutions of higher education, and the report noted that literature on the NSS is in general agreement that it has had a strong impact in this regard. The review canvassed the views of stakeholders including policy and institution representatives as well as students, using a survey, interviews and focus groups. The report found that perceived strengths of the NSS include: the robustness of its data; its high response rates from students; the accessibility of the data, with contextual and explanatory data emerging from open text questions; its accountability; and its capacity for identifying and mapping trends in higher education and bench-marking courses at different institutions. The literature review conducted in the review also found that positive views on the NSS include its well-established theoretical basis, that it is generally a valid and reliable instrument, and that it provides a useful overview of performance across the higher education sector.

More negative responses from both the empirical research conducted in the review and its literature survey focused on concerns that measuring students' views on what their institutions should provide, rather than the learning gains which students have achieved, is a faulty approach to appraising HEIs. However, the report authors note that some of the survey questions relate to students' personal development. In particular, policy and funding stakeholders tended to feel that student 'satisfaction' was a poor proxy for quality in comparison to other indicators, and could in fact be a distraction from improving teaching in HEIs.

Brown *et al.* (2015) also express concern about the use of student satisfaction surveys in assessing 'quality teaching'. In particular, the authors find that the results of these surveys are heavily dependent on context: for example, the students' expectations of the services they should receive at their institution was strongly influenced by their understanding about what other institutions were providing their students, and students' willingness to complain about their education was also highly variable. Therefore, there are serious considerations in relation to the reliability and validity of this kind of data, a point echoed by Lodge and Bonsanquet (2014) in their discussion of both the NSS and Australia's Course Experience Questionnaire, which is used to measure overall student experience through their degree. With this in mind, Brown *et al.* suggest that student satisfaction should not be used as a proxy for 'quality' in higher education, and, rather, should be assessed separately.

The literature also suggests that students have also been found generally to be weak in assessing their own development, and have few insights to share on improvements to teaching (Zhao and Gallant 2012), and the OECD (Henard and Roseveare 2012) has reported a number of other issues with the use of student feedback surveys to measure 'quality teaching'. Among these, the authors argue that students may be sceptical about their role in evaluating their teaching, especially when they have felt that their previous feedback has been disregarded. Furthermore, they suggest, students may harbour unrealistic expectations of the change that institutions and teachers are able to deliver in response to their feedback, and be ignorant of the constraints under which teachers and their institutions operate, and the competing obligations they must manage and which may impact on their capacity to engage with their students, as noted elsewhere in this review. The report also warns that students may take the opportunity to provide feedback as a means to express political views about the administration of the institution and seek to obstruct the process, or to use it as a lever to pressure their teachers to grade them more favourably. In addition, teachers may themselves be dubious about the capacity of students to accurately assess academic matters and about the reliability of feedback gathering tools. Nonetheless, the report states that student feedback surveys contain insights into how students perceive their teachers and the quality of the education they are experiencing, and if collected and analysed appropriately, can be valuable in assessing and improving teaching in higher education.

One of the few pieces of empirical research into student perception of 'quality teaching' captured in this literature review was Douglas *et al.*'s (2015) *Understanding student satisfaction and dissatisfaction: an interpretive study in the UK higher education context*. This paper employed a "critical incident technique" approach, using surveys with sections on learning and teaching to ask 350 undergraduate students at two business schools in the UK to submit a narrative on formal education sessions or on their personal interactions with teachers and administrative staff at their HEI. This study design did not seek to measure outcomes, but rather capture how participants felt about their learning experience, and thus faces the same issues in evidence quality as any piece of research referred to earlier in this section.

3.3.4 Employer feedback

As noted in section two of this report, the role of HEIs in preparing students for the modern workforce is a matter of considerable discussion in the literature and, in the view of the BIS White Paper, *Success as a knowledge economy: teaching excellence, social mobility and student choice* (2016), that, among other things, “we expect higher education to deliver ... career readiness and an environment that develops the ‘soft skills’ that employers consistently say they need” (p. 43).

Despite this, evidence that relies upon feedback from employers of new graduates is sparse. Surveys of employers that gather views on student preparation for the workforce are used to measure teaching impact by HEIs and in university rankings systems, such as those analysed by Bergseth *et al.* (2014), although little information about how such feedback is gathered and assessed has been found in this literature review. Using employer feedback data to measure the quality and impact of teaching reflects the view that a goal of HEIs is to prepare students for professional life, or what Gunn and Fisk (2013) refer to as the enabling of students “to enter fit-for-purpose into a profession” (p. 13).

4 Reflections and provocations

Given the manifold complexities in defining 'quality teaching' in higher education, it is perhaps not surprising that the discourse around it is characterised by ambiguity and inconsistency. These definitional difficulties have led to a reliance on measuring 'quality teaching' and its impact rather than attempting to define it, which in and of itself is not necessarily problematic. However, this literature review has found that there is a striking lack of evidence behind the indicators used in assessing teaching in higher education, which must be addressed through much more rigorous research.

Indeed, while research activity has historically been prioritised and rewarded over teaching, there has been significant movement in the higher education sector to place more pressure on institutions to demonstrate the impact of their teaching, particularly on student outcomes. Not least of this, the Teaching Excellence Framework (TEF), which intends to promote excellent teaching for all students and will employ a number of measures, as proxies for 'quality teaching' will likely have a significant impact on teaching practice in this sector. These measures will include, for its second year, student views drawn from the NSS, and student retention rates, and rates of employment or further study, six months after graduation (BIS 2016b). Initiatives such as these must be supported by rigorous, empirical research on 'quality teaching' and its impact.

In particular, there are a number of ongoing research projects looking into student outcomes that have the potential to make a strong contribution to the evidence base on 'quality teaching' and its impact. For example, HEFCE recently launched its learning gains programme, which includes 13 collaborative pilots with more than 70 universities and colleges, and intends to test and evaluate measures of learning gain in the English higher education system. HEFCE defines 'learning gains' as "improvement in knowledge, skills, work-readiness and personal development made by students during their time spent in higher education" (<http://www.hefce.ac.uk/lt/lg/>).

Testing is pursued through five broad approaches: student grades; self-reporting surveys; standardised testing of students; other qualitative measures, including encouraging students to reflect on their learning and the skill which they have acquired through their higher education; and mixed methods, a proposed combination of methods and indicators used to track the student's educational performance. Given the overlap between the approaches for testing identified in this project, and those included in this literature review, there is the potential to analyse their use more rigorously than has been found in the research published thus far.

The HEA has also published findings from a UK Engagement Survey (UKES) pilot, which was initiated in 2013 and expanded in 2014. This pilot sought to explore the usefulness and applicability of these kinds of surveys, which are in use in a number of other English-speaking countries; improve understanding about the levels of student engagement in UK HEIs; support institutions participating in the pilot to use student engagement data; and to raise awareness about the use of this kind of data. Questions used in the 2013 pilot survey were clustered around four areas:

Critical thinking: Four questions asked students about the emphasis their coursework has placed on a range of mental activities: analysing, synthesising, evaluating and applying information.

Course challenge: Three questions focused on how hard students have worked and how challenged they have been.

Collaborative learning: Three questions asked students how often they have interacted with other students in a range of ways.

Academic integration: Five questions (one of which also appears in the Collaborative Learning group) explored students' interaction with academic staff, participation in class and discussions with others outside class. (Buckley 2013).

The expanded 2014 survey grouped questions into the following areas:

Higher-order learning: Five questions ask about the emphasis students' coursework has placed on a range of mental activities, such as analysing ideas and applying facts and theories.

Collaborative learning: Four questions explore the frequency with which students have interacted with each other in a range of educationally important ways.

Academic integration: Six questions ask students about their interaction with academic staff.

Course challenge: Two questions focus on students' preparation for class, and their sense of being challenged by the course.

Reflective and integrative learning: Six questions ask about the frequency with which students have combined ideas from different parts of their course, connected what they have learnt to their prior experiences, and reflected on their own and others' views.

Engagement with research: Four questions focus on the emphasis in the course on students learning about the methods and results of research.

Formulating and exploring questions: Four questions explore the course emphasis on students formulating and exploring open-ended lines of enquiry.

Skills development: Twelve questions ask about students' development of a range of important skills and abilities.

Time spent on activities: Seven questions collect information about the number of hours that students spend on different activities. (Buckley 2014)

While the reports on this pilot do not constitute evaluations themselves, the author notes that this is an area of increasing interest for higher education practitioners and researchers, with some advocates arguing that 'student engagement' is a more valid proxy for learning gains (a corollary for 'quality teaching') than student satisfaction (Buckley 2013).

Important research is also ongoing at the Open University on 'learning analytics', which the University defines as "the measurement, collection, analysis and reporting of 'big data'

related to learners and their contexts” (<http://www.open.ac.uk/iet/main/research-innovation/learning-analytics>). The aim of this research is to provide an evidence base to inform teaching and learning initiatives, specifically to tackle issues of student retention, and to inform efforts to support learning, student services and feedback in order to be competitive in the global education market. The results of this research activity could have the potential to make a strong contribution to the discourse on ‘quality teaching’ in higher education.

However, the results of this literature review, on how higher education ‘quality teaching’ and its impact is defined and demonstrated, clearly show a need for more consensus, or at least discussion, on a number of key points. Firstly, more of a shared understanding must be established on the notion of ‘quality teaching’ in higher education, and the goals and priorities of higher education institutions themselves. This is essential if HEIs are to equip students for the modern workforce or life more generally, or for the dissemination of knowledge, particularly through more financially rewarding research activities, for example, and how these sometimes competing goals must be harmonised. Secondly, there needs to be more consensus in the discourse on how ‘quality teaching’ may be measured or evaluated; this is a complex question, and one that reflects the kinds of challenges faced with evaluation in any field. On the basis of the findings in this report, we recommend that the indicators set out in this document, at the student, teacher and institutional levels, be used as a starting point for this process. While there is little evidence at this stage that these indicators are relevant or accurate sources of analysis, given their predominance in the literature and in the practice of HEIs, this approach would certainly constitute a constructive start to this research.

The first step would be to work with stakeholders in higher education to examine how these indicators interact with each other. For example, how is the availability of teachers (an indicator at the teacher level) related to the sound financial and administrative management of the institution (an indicator at the institutional level)? How is the extent to which students feel challenged by their course (student level) influenced by the competence and expertise of the teacher (teacher level)? With more discussion and analysis of these questions, researchers, policy makers and practitioners would be better placed to then ordinarily rank by importance the outcomes of ‘quality teaching’ in higher education, such as those set out in this report. With this foundation, ‘quality teaching’ interventions could then be developed and evaluated, providing the implementation research that is currently lacking in this field. This research activity should be informed by and responsive to the increasing activity on assessing teaching both in initiatives such as HEFCE’s learning gains programme and the Open University’s work on learning analytics, as well as the ongoing policy reforms that are already impacting upon teaching in higher education.

5 Bibliography

This report includes a searchable Excel database (available from the HEA website) with the literature captured in this review divided into two sections: one tab includes the literature that was cited in this review, and a second tab includes the literature that informed this review. Both tabs contain the bibliographic information of all the literature contained therein. In addition, the tab for the literature cited in this review also contains information on what relevant themes are covered in each paper, as well as the national context(s) to which the paper refers.

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Appendix: Methods, inclusion criteria, and databases

Methods

We used several different ways of searching for relevant evidence. These included the following:

1. A preliminary search in ERIC database using search terms including 'student', 'college OR university', 'control', 'experiment'.
2. A systematic search using a targeted search of education databases. We liaised with education research experts from RAND's Knowledge Services team and focused on the two most comprehensive education databases – Education Research Information Center (ERIC) and Education Abstracts (EBSCO) – to identify relevant empirical evidence and research developments. We also searched the Web of Knowledge/Science, HEER and OpenSigle databases to ensure that all relevant literature was captured. The search focused on English-language literature from the UK, but included seminal international literature as appropriate, particularly from key countries identified in our proposal and highlighted by the HEA, namely Australia and Germany (full list below). In accordance with the requirements of the invitation to tender (ITT), the database search was restricted to relevant publications produced after 2012.
3. 'Snowball' searching. All papers captured by the search were then analysed by the research team. Bibliographies and references cited in the literature, which met the criteria for inclusion in this review, were followed up on and identified for inclusion in this review. Through this 'snowballing' approach, 47 pieces of literature were added to the review. Literature identified through this step included a number of the strongest contributions to the discourse of quality teaching in higher education, including key grey literature.
4. The research team noted that a number of relevant articles from the journal *Quality in Higher Education* were not captured in this search. We therefore reviewed editions of the journal published within the timeframe of this literature review and included all relevant articles. While four articles were initially found in the search, the manual review of the journal resulted in an additional seven articles, of which four were cited in the report. These papers were not initially found in the search as their respective titles, abstracts and subject descriptions did not contain all the search terms listed in the section below.

Inclusion criteria

The search strategy was structured around a PICOS framework, which groups search terms into theme: population; intervention; comparison; outcome; study.

Accordingly, the first set of inclusion criteria were as follows:

Inclusion criteria	
Participants	Students attending any higher education establishments in UK or comparable countries including USA, Canada, Europe, Australia, New Zealand
Intervention	Any quality teaching initiatives with students provided by teaching staff
Comparator	Same or similar groups of students without the initiative, no intervention, historical control groups of same students or different students
Outcomes	Student skills, knowledge, assessments, grades, passing exams, employment rates, student satisfaction, student retention rates
Study design	Any comparative study

The exclusion criteria were as follows:

Exclusion criteria	
Participants	Students attending schools, work-place education, countries outside UK (USA, Canada, Europe, Australia, New Zealand)
Intervention	Any quality teaching initiatives with staff
Comparator	-
Outcomes	Staff satisfaction, staff retention
Study design	Studies with no comparison group

Because we did not find any includable studies from the systematic searches, we relaxed the inclusion criteria to include studies without comparison groups.

Search terms

Search terms and synonyms included:

Search terms	
Participants	(Students OR learners) AND ('higher education', university, college, school, faculty, 'further education') AND (UK OR 'united kingdom' or England or Scotland or Wales or Ireland or Britain or USA OR Canada OR Europe OR Germany OR Australia OR 'New Zealand').
Intervention	Teach* or learn*
Comparator	-
Outcomes	Excellence or quality or effect* or impact or performance or achiev*
Study design	Compar* or study or trial

Databases searched and numbers of studies found

RAND Knowledge Services ran searches in ERIC and Education Abstracts. Including all the search parameters including comparative study design terms yielded fewer than 2,000 citations when employing either title/abstract or title/abstract/subject searches. In reviewing the results of this search, the research team noted that a high number of citations were about high school students. The research team decided to rerun the search substituting the search string of 'students or learners' with 'college students' or 'university students' or 'college learners' or 'university learners'. This revised strategy resulted in about 170 entries, the majority of which were not related to the research topic. The research team also noted that a number of relevant articles that were captured by the first search were not present in the revised search, as these articles' title, abstract, or subject as listed in the databases did not contain the term 'college student' or 'university student', but only 'student' or 'learner'.

The revised strategy was thus abandoned as too narrow, and 'student or learner' was reinstated as a search term. However, search records containing the term 'high school', 'primary school' or 'elementary school' were marked for deletion. Three databases were searched with this revised strategy: ERIC, Education Abstracts and Web of Science. The total number of results before duplicate records were deleted was over 17, 000. Of these, about 2,500 records which included the terms 'elementary school', 'high school' and/or 'primary school' and were excluded. Expanding this search to include all planned databases planned for this review (HEER, and OpenSigle for grey literature) was expected to increase the number of results dramatically.

After reviewing a sample of these results, it became clear that the 'student or learner' search string was responsible for a high proportion of irrelevant results, and the decision was made to exclude it. The parameters for the search terms were therefore revised as following:

Revised search terms and synonyms	
Participants	('Higher education', university, college, school, faculty, 'further education') AND (UK OR 'united kingdom' or England or Scotland or Wales or Ireland or Britain or USA OR Canada OR Europe OR Germany OR Australia OR 'New Zealand').
Intervention	Teach* or learn*
Comparator	-
Outcomes	Excellence or quality or effect* or impact or performance or achiev*
Study design	Compar* or study or trial

The HEER database was also included in this search, alongside ERIC, Education Abstracts and Web of Science. This search resulted in around 5,400 records. The research team then reviewed these results manually, ultimately retaining 44 of these records.

The search strategy was then expanded to include grey literature, using the source OpenSigle. This resulted in 11 further records, although none were referenced in or informed this report.

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